Climate Change and Growth

Stochastic IAMs in Dynare

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Exercise 1: basics of simulations of deterministic models

Consider /Codes2/B_RBC/notebook_rbc.mlx and answer questions at the end of the note-book. We would like to explore an alternative damage functions.

1. In baseline scenario, our damage function implies 3% TFP loss by the end of the century. We would like to double the damage function coefficient. This damage function is likely to change the terminal state. To

```
1  [y_2,oo_2,M_2] =
↪  update_terminal_state('gamma',2.379e-5,oo_,M_,exo_init_ts,y_guess);
2  [y_2]           = EP_deterministic_path(y_2,exo_init_ts,oo_2,M_2,options_);
```

2 Compare the transition dynamics between the two scenarios by plotting them on the same figure.

Exercise 2: the cost of the transition

Consider /Codes2/B_RBC/notebook_rbc2.mlx and answer questions at the end of the note-book. We would like to compute the gains and loss from the transition.

1. Plot a subplot figure in which you report the percentage consumption loss/gain between the optimal carbon price policy and business-as-usual scenario and in second subplot the temperatures avoided.