

Replication files for:

**“Workers, Capitalists, and the Government:  
Fiscal Policy and Income (Re)Distribution”**

Cristiano Cantore<sup>†</sup>

Lukas B. Freund<sup>‡</sup>

January 2021

This document describes how to use the replication codes accompanying the article “Workers, Capitalists, and the Government: Fiscal Policy and Income (Re)Distribution.” Corresponding to sections 2 and 3 of the paper, there are two main folders that respectively consider the partial equilibrium consumption-savings problem and the proposed, new two-agent New Keynesian (TANK) model with capitalists and workers.

Should you have any questions or comments, please feel free to contact us under the indicated email addresses.

## **1 Partial equilibrium iMPCs**

### **1.1 Description of main files**

The files contained in this folder are as follows.

`main_PE_MPCs_Analytical_Plotting.m`

This file computes and plots iMPCs for a one-off income shock in a partial equilibrium consumption-savings model with portfolio adjustment costs, using the analytical solution (accurate to first-order)

---

<sup>†</sup>Bank of England, CfM & University of Surrey. Email: [cristiano.cantore@gmail.com](mailto:cristiano.cantore@gmail.com). Web: [cristianocantore.com](http://cristianocantore.com).

<sup>‡</sup>University of Cambridge. Email: [lukas.beat.freund@gmail.com](mailto:lukas.beat.freund@gmail.com). Web: [lukasfreund.com](http://lukasfreund.com).

provided in the main text. The user can choose the anticipation horizon  $s$ . The structural parameters are calibrated to match the empirical evidence, as described in the main text.

`main_PE_MPCs_Analytical_Matching.m`

This file implements computes the values of population share  $\lambda$  and portfolio adjustment cost parameter  $\psi$  to match targets from micro consumption data.

`main_PE_MPCs_LTI.m`

Complementing the analytical solution, this file solves the partial equilibrium model numerically. We use the linear time iteration approach of [Rendahl \(2017\)](#). We also used this approach to compute the iMPCs in the model with habits (see parameter ‘sPar.hab’).

`main_PE_Rates_Analytical_Plotting.m`

This file is similar to `main_PE_MPCs_Analytical_Plotting.m`, the only difference being that it looks at interest rate shocks.

`main_PE_Rates_Analytical_Extra.m`

This file plots some additional figures, such as the interest rate elasticity of consumption as a function of  $\psi$ .

`sSettings.mat`

This structure object stores generic, design-related settings to ensure consistency across figures.

## 1.2 Exact replication of figures in the paper

**Figure 2a.** Run `main_PE_MPCs_Analytical_Plotting.m` with  $s=0$  and `optionModel` set to H.

**Figure 2b.** Run `main_PE_MPCs_Analytical_Plotting.m` with  $s=0$  and `optionModel` set to W.

**Figure 3a.** Run `main_PE_MPCs_Analytical_Plotting.m` with  $s=3$  and `optionModel` set to H.

**Figure 3b.** Run `main_PE_MPCs_Analytical_Plotting.m` with  $s=3$  and `optionModel` set to W.

## 2 TANK models

### 2.1 Description of main files

The sub-folder `Dynaremastercodes` contains Dynare implementations (Adjemian *et al.*, 2018) of the different TANK models. The remaining sub-folders contain files to reproduce the exact figures shown in the main text. Regarding the former, the files contained in this sub-folder are as follows.

#### Baseline models.

`tank_uh.mod`

Dynare code to replicate the baseline TANK-UH model linearized around 0 steady-state government spending/debt.

`tank_uw.mod`

Dynare code to replicate the baseline TANK-UW model linearized around 0 steady-state government spending/debt.

`tank_cw.mod`

Dynare code to replicate the baseline TANK-CW model linearized around 0 steady-state government spending/debt.

#### Medium-scale models.

`tank_cw_ms.mod`

Dynare code to replicate the medium scale version of the TANK models used in the paper. The file includes a pre-processor macro variable at the top that can be set to choose between different version of the model, i.e., RANK, TANK-UH, TANK-UW, TANK-CH and TANK-CW.

### 2.2 Exact replication of figures in the paper

**Figure 5.** Run `~TANKmodels/fig5/run_fig5.m`.

**Figure 6a.** Run `~TANKmodels/fig6/figure6a/run_fig6a.m`.

**Figure 6b.** Run `~TANKmodels/fig6/figure6a/run_fig6a.m`.

**Figure 7.** Run `~TANKmodels/fig7/run_fig7.m`.

**Table 3.** Run `~TANKmodels/table3/simplemodels/run_table3.m` for the first four columns and `~TANKmodels/table3/mediumscale/run_table3MS.m` for the last four columns.

## 3 Additional materials

### 3.1 Empirical evidence

**Figure 1.** Figure 1a relies on data from [Fagereng \*et al.\* \(2018\)](#), analyzed in and kindly shared by [Auclert \*et al.\* \(2018\)](#). Figure 1b replicates Figure 1 in [Jappelli and Pistaferri \(2014\)](#) using data distributed through [openICPSR](#). We therefore do not include these files in this replication kit.

**Figure 4.** Data and code for this figure are in the sub-folder VAR. To reproduce the figure, run `VAR_Plotting.m`. That same file also permits reproducing the VAR-based figures shown in the online appendix.

### 3.2 Online appendix

This folder contains various sub-folders with codes that replicate the figures in the online appendix.

## References for documentation

- Adjemian, S., Bastani, H., Juillard, M., Karamé, F., Maih, J., Mihoubi, F., Perendia, G., Pfeifer, J., Ratto, M., and Villemot, S. (2018). Dynare: Reference Manual Version 4. Technical Report 1, CEPREMAP.
- Auclert, A., Rognlie, M., and Straub, L. (2018). The Intertemporal Keynesian Cross. Working Paper 25020, National Bureau of Economic Research.

- Fagereng, A., Holm, M. B., and Natvik, G. J. J. (2018). MPC Heterogeneity and Household Balance Sheets. SSRN Scholarly Paper ID 2861053, Social Science Research Network, Rochester, NY.
- Jappelli, T. and Pistaferri, L. (2014). Fiscal Policy and MPC Heterogeneity. *American Economic Journal: Macroeconomics*, **6**(4), 107–136.
- Rendahl, P. (2017). Linear Time Iteration. *mimeo*.