Replication files for: "Macroeconomic Outcomes in Disaster-Prone Countries" published in Journal of Development Economics Volume 161, March 2023.*

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1 The toolbox

All results of the paper are obtained by solving the model with Taylor projection, a solution method developed by Levintal (2018) and used by Fernandez-Villaverde and Levintal (2018) to solve DSGE models with rare disasters.

For all the details about the solution method please refer to the paper and the online appendix of Fernandez-Villaverde and Levintal (2018).

For all the preliminay steps and the instructuons to run the toolbox in Matlab please see the file "User Guide.pdf" and Oren Levintal's website (https://sites.google.com/site/orenlevintal/taylor-projection).

2 Replicate Figures 4 and 5

Open folder "CMP_JDE_Replication_codes\Model_baseline".

To replicate figure 4:

- Set calibration of disasters by opening the file params_SS1\RBC_EZ_adjCost_Calvo\parameters.m and by setting do_disaster_prone=1;
- Run file do_solve.m;
- Run file accuracy_and_simulation.m;
- Run file make_Figure_II.m;
- Run file IRFs_disaster.m.

To replicate figure 5:

- Change the calibration of the size of disasters by opening the file params_SS1\RBC_EZ_adjCost_Calvo\parameters.m and by setting do_calibration_Haiti=1;
- Run file do_solve.m;
- Run file accuracy_and_simulation.m;
- Run file make_Figure_II.m;
- Run file IRFs_Haiti.m.

*This file reflect the work of the authors and do not necessarily represent the view of the International Monetary Fund, IMF policy, Banca d'Italia or DFID.

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3 Replicate Tables 4-8

Open folder "CMP_JDE_Replication_codes\Model_baseline".
To replicate Table 4:

- Set calibration of disasters by opening the file params_SS1\RBC_EZ_adjCost_Calvo\parameters.m and by setting do_disaster_prone=1;
- Run file do_solve.m;
- Run file accuracy_and_simulation.m;
- Run file present_tables.m which produces the simulation averages for disaster-prone countries and store the results;
- Set calibration of disasters by opening the file params_SS1\RBC_EZ_adjCost_Calvo\parameters.m and by setting do_non_disaster_prone=1;
- Run file do_solve.m;
- Run file accuracy_and_simulation.m;
- Run file present_tables.m which produces the simulation averages for non-disaster-prone countries and store the results;
- Follow instructions in the note to Table 4 to calculate differences in simulation averages. The consumption equivalent loss is approximated by the percent difference in households' welfare.

To replicate Tables 5-8:

- Select the relevant calibration of disasters and/or of the parameters in the file params_SS1\RBC_EZ_adjCost_Calvo\parameters.m as reported in each table;
- Run file do_solve.m;
- Run file accuracy_and_simulation.m;
- Run file present_tables.m which produces the simulation averages and store the results;
- Follow instructions in the note to the tables to calculate differences in simulation averages. The consumption equivalent loss is approximated by the percent difference in households' welfare.

References

Fernandez-Villaverde, J. and Levintal, O. (2018). Solution methods for models with rare disasters. *Quantitative Economics*, 9(2):903–944.

Levintal, O. (2018). Taylor projection: A new solution method for dynamic general equilibrium models. *International Economic Review*, 59(3):1345–1373.