

# Readme file for data and programs accompanying McKay and Wieland (2021), “Lumpy Durable Consumption Demand and the Limited Ammunition of Monetary Policy.”

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The enclosed data and programs reproduce the tables and figures in the paper. All data and programs are provided without warranty.

1. To recreate all the figures in the paper, including the appendix figure run the python script `rundirectory.py`.
  - On line 6 of the `rundirectory.py` you need to enter the path of the replication directory.
2. Running this script takes around 2 days on an 8-core iMac (2020 model). Most of this time is spent estimating the model and computing the partial equilibrium Jacobians. The programs were executed using:
  - Matlab 2020a
    - Matlab needs to be executable from the command line.
  - Python 3.8.8 (Anaconda distribution)
3. The script runs the following files in sequence:

- (a) IRFs/main.m: Creates Figures 2, 3, and Appendix Figure A.3. All subroutines are included in the Folder IRFs. The programs call raw data files from the Data folder.
    - Appendix Figure A.2 can be obtained by changing the parameters in the Specification section at the beginning of main.m.
  - (b) Model/figure1.m: Creates Figure 1 and Appendix Figure A.1. This file runs the estimation of the model which takes around one day to complete.
  - (c) Model/solvesteadystate.m: solves for the steady state of the model.
  - (d) Model/computejacobians.m: solves for the partial equilibrium Jacobians of the model. This code will run for around a day.
  - (e) Model/constructirfs.m: solves for the general equilibrium Jacobians of the model.
  - (f) Model/figure45.m: Creates Figures 4 and 5.
  - (g) Model/figure6.m: Creates Figure 6.
  - (h) Run Model/figure7.m: Creates Figure 7.
  - (i) Model/figure811.m.: Creates Figures 8-11 and Appendix Figure A.4.
4. All figures are stored in the Figure folder of the base directory in png format.