The Supply-Side Effects of Monetary Policy

Replication Files

1 Package contents

1.1 Model calibration results

1. `statics_calibrations.py`: Generates main results for static model, including oligopoly results (Table 4, Figure 3, Figure D.1, Figure D.2, Figure H.1, Table H.1).
2. `statics_pareto_prod_calibration.py`: Generates industrial concentration results (Figure 4)
3. `kimball_dynamics.py`: Generates main results for dynamic model, including both interest rate shock and money supply shocks (Figure 5, Figure 6, Table 5, Figure D.3, Figure D.4, Table E.1, Figure E.1, Figure E.2)
4. `kimball_dynamics_Table6.py`: Identical to kimball_dynamics.py, but instead calibrates to 4bp money supply shock for comparability with menu cost results. Generates Calvo model columns in Table 6.

Note: Run `python3 [filename.py]` to run each program. Each runs independently without requiring other programs to be run first.

1.2 Empirical results

Scripts that assemble datasets used in results.

1. `estimate_quarterly_markups.do`: Builds quarterly markups for Compustat firms, saves `"data/Compustat/Compustat_clean.dta"`. (Note: Requires user to download quarterly report data from Compustat and Total Q data from Compustat, save in ./data/Compustat)
2. `aggregate_quarterly_markups.do`: Cleans quarterly markup data and adds lags, saves `"data/Compustat/Compustat_clean_with_lags.dta"`
3. `add_markup_covariances.py`: Calculates the covariance between firms' markups and changes in costs and markups over a number of lags (note: program takes a few hours to run). Saves `"data/data_temp/aggregated_*.dta"` files, where * refers to markup variable used.
4. `create_quarterly_dataset.do`: Assembles quarterly data from a number of other sources (e.g., Romer-Romer shocks, Gorodnichenko Weber shocks, quarterly CPI and industrial production, etc.). For data from public sources, source files are already provided in the data folder. Saves `"data/data_temp/quarterly_aggregates_clean.dta"`

Scripts that generate tables/figures in the paper.

1. `TFP_local_projections.do`: Generates Figure 7
2. `firm_level_local_projections.do`: Generates Figure 8 (toggling inputs generates Figure B.2, Figure B.3, and Figure B.9)
3. `sector_productivity_projections.do`: Generates Table 7 (toggling inputs generates Table B.2 and Table B.3)

Miscellaneous notes.

1. We ran these files using Stata 17.
2. The Compustat data on public firms was downloaded from WRDS on April 1, 2022. We used the North America Fundamentals Quarterly database from WRDS and pulled the following variables: gvkey, datadate, fyearq, fqtr, fyr, indfmt, consol, popsrc, datafmt, tic, cusip, conm, curcdq, datacqtr, datafqtr, fdateq, rdq, atq, cheq, chq, cogsq, cshoq, dlttq, dpq, gdwlq, ibq, intanq, ltq, niq, oiadpq, oibdpq, piq, ppegtq, ppentq, pstkq, revtq, saleq, teqq, tieq, tiiq, txdbq, txtq, xiq, xrdq, xsgaq, capxy, cogsy, dpy, dvy, oiadpy, oibdpy, prstkcy, revty, txty, xrdy, exchg, costat, mkvaltq, prccq, conml, fyrc, naics, sic.
3. The data on Total Q was downloaded from WRDS on March 29, 2022. We pulled the following variables: gvkey, datadate, fyear, k_int_know, k_int_org, k_int_offbs, k_int, q_tot.

1.3 Menu cost calibration

1. menu_costs_Kimball.py: Money supply shock under Kimball model (generates menu cost model results in Table 6).
2. menu_costs_CES.py: Money supply shock under CES model. The file must be run after menu_costs_Kimball.py, because it chooses a wage path to exactly match the money supply path generated by the Kimball model.
3. compare_menucost_IRFs.py: Plots outputs from CES and Kimball menu cost models together (Figure C.2, Figure C.3)

2 Dataset list

2.1 Data included in this Replication folder

1. data/BEA/*. Depreciation rates from the Bureau of Economic Analysis (BEA).
2. data/BLS_PPI/*. Producer price indices from the Bureau of Labor Statistics (BLS).
3. data/BLS_Productivity/*. Multifactor and labor productivity measures from the Bureau of Labor Statistics (BLS).
4. data/Census_Mfg_Concentration/*. Four, eight, twenty, and fifty-firm concentration ratios from the 2002 and 2007 Census.
5. data/Damadoran_ERP/*. Equity risk premium measures from Aswath Damodaran (available at www.damodaran.com).
6. data/FRED/*. Various popular economic indicators downloaded from FRED.
7. data/GZ_ExcessBond/*. The excess bond premium estimated by Gilchrist and Zakrajšek (2012) and available from Favara et al (2016).
8. data/Treasury_Yield/*. Nominal yield curve data from Gurkaynak et al (2007).
9. data/Prod_UPS_ODE_repl.xlsx. Fitted curves on the distribution of firm pass-through, markups, sales shares, and productivities from Belgian data, using estimates from Amiti et al (2019). Detailed information on constructing these fitted curves is available in the replication data for Baqaee et al (2023).

2.2 Monetary shock series included in this Replication folder

1. data/Bauer_Swanson_2022/*. Monetary shocks identified by Bauer and Swanson (2023).
2. data/Gorodnichenko_Weber/*. High-frequency monetary shocks identified by Gorodnichenko and Weber (2016).
3. data/Miranda_Agrippino_Ricco_2017/*. Monetary shocks identified by Miranda-Agrippino and Ricco (2021).
4. data/Monetary_shocks/*. Romer and Romer (2004) monetary shocks extended by Wieland and Yang (2020).

2.3 Data not included in this Replication folder.

1. Compustat Fundamentals Quarterly. Firm-level data used to calculate markups is from the Compustat database, available through Wharton Research Data Services (WRDS). Specifically, we download from WRDS the Compustat fundamnetal quarterly files (names, identifiers, and data items). All cleaning and filtering of the data is done in the scripts above (see estimate_quarterly_markups.do).
2. Peters and Taylor Total Q. Firm-level data on stocks of intangible capital are used from the Peters and Taylor Total Q database, available through Wharton Research Data Services (WRDS). Specifically, we download from WRDS the annual Peters and Taylor Total Q files. All cleaning and filtering of this data is done in the scripts above (see estimate_quarterly_markups.do).

3 Data Availability Statement

Data Availability Statement: This article uses data from the Compustat Fundamentals Quarterly and Peters and Taylor Total Q databases, which are available through Wharton Research Data Services. All other data required for replicating the results in this paper are available from public sources and are included in this replication folder.

4 Data citations

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