This note provides instructions for replicating the results in “Understanding U.S. Inflation During the COVID Era” by Laurence Ball, Daniel Leigh, and Prachi Mishra.

Please address any questions to [LBall@jhu.edu](mailto:LBall@jhu.edu), [DLeigh@imf.org](mailto:DLeigh@imf.org) and [PMishra@imf.org](mailto:PMishra@imf.org)

For each table and figure, the following list indicates the code that replicates the item and any additional instructions needed.

Before running each STATA code, indicate your “main” directory path at the top of the code. This path should be to the folder where you have saved the replication files. Also, make sure that your main directory includes all the items provided, including the folders called “results” with two subfolders: “charts” and “tables.”

**Tables**

* **Table 1.** "Table 1 Phillips Curve Estimates.do" Results for the final formatted table saved in “results\tables\final tables\Table1 Phillips Curve Estimates.xls.”
* **Table 2.** “Table 2. Explaining Headline Inflation Shocks, 2020-2022.do”. Results for the final formatted table saved in “results\tables\final tables\Table 2 Explaining Headline Inflation Shocks.xls” Please note that the data file and replication code for Table 2 does not include four variables that are proprietary (our license for the data for these variables does not allow for sharing with non-subscribers):
  + Backlogs of work. Data for the IHS Markit US Composite Backlogs of Work Index are obtained via Haver Analytics.
  + Harper index. Data for the Harper Petersen Charter Rate Index are obtained via Haver Analytics.
  + Baltic dry index. Data for the Baltic Exchange Dry Index are obtained via Haver Analytics.
  + Supply delivery times. Data for the S&P Global Manufacturing Suppliers' Delivery Times are obtained via Haver Analytics.

**Figures**

* **Figure 1.** “Figure 1 - Decomposition Headline.do" Produces chart data, saved to Figure 1A.xls and Figure 1B.xls.
* **Figure 2.** “Figure 2 - Expectations.do" Produces chart data, saved to Figure 2.xls.
* **Figure 3.** “Figure 3 - Inflation Gap vs VU 1968-2022.do” Produces chart data, saved to Figure 3 Quarterly.xls and Figure 3 Monthly.xls
* **Figure 4.** “Figure 4 - Fitted Relationship. Inflation Gap vs VU 1985-2022.do” Produces chart data, saved to Figure 4 Quarterly.xls and Figure 4 Monthly.xls
* **Figure 5.** “Figure 5 - CPI Inflation Excluding Food and Energy vs VU 1968-2022.do” Produces chart data, saved to Figure 5 Quarterly.xls and Figure 5 Monthly.xls
* **Figure 6.** “Figure 6 - PC Functions of VU and H.do” Produces chart data, saved to Figure 6 Panel A.xls and Figure 6 Panel B.xls
* **Figure 7.** “Figure 7 - Predictions.do” Produces chart data, saved to Figure 7 Panel A.xls and Figure 7 Panel B.xls
* **Figure 8.** “Figure 8 - Counterfactual.do” Produces chart data, saved to Figure 8.xls
* **Figure 9.** “Figure 9 - Wage Inflation Gap vs VU.do” Produces chart data, saved to Figure 9.xls
* **Figure 10.** “Figure 10 - Contributions and Bands - Quarterly.do” Produces chart data, saved to Figure 10 Panel A.xls and Figure 10 Panel B.xls
* **Figure 11.** “Figure 11 - Explaining Headline-inflation Shocks.do” Produces chart data, saved to Figure 11 Panel B Energy.xls, and Figure 11 Panel B Auto.xls
  + Note that because data on “backlogs of work” are proprietary, as mentioned above, the estimation code involving that variable (Panel A and Panel B on Backlogs of Work) cannot be run.
* **Figure 12.** Please open the folder “Figure 12” and proceed as follows:
  + Run “Figure 12 - Data Prep - Decomposition.do,” which calculates inputs for the figure. The outsheets that the code produces should be pasted into the Excel file “Figure 12 - Decomposition Input.xlsx”.
  + Run “Figure 12 - Display Chart.do,” which produces the bar chart in Figure 12 based on the results stored in the aforementioned Excel file (computed by the file and stored in “chart data”).
  + Note that because data on “backlogs of work” are proprietary, as mentioned above, the estimation code for that element of the figure cannot be run. We have pasted the results for that element directly into the aforementioned Excel file (sheets “sheets “12mo-decomp\_his\_direct\_effect\_m” and “12mo-decomp\_his\_INdirect\_effect” in Figure 12 - Decomposition Input.xlsx).
* **Figure 13.** “Figure 13 - Comparison Across Models.do” Produces chart data, saved to Figure 13.xls
* **Figure 14.** "Figure 14 - Beveridge.do" Produces chart data, saved to Figure 14.xls.
* **Figure 15.** “Figure 15 - Nonlinear PC with U.do” Chart data and calculations saved in Figure 15 - Nonlinear PC with U.xlsx
* **Figure 16.** Open the folder “Figure 16.” Produces chart data, saved to “Figure 16 Data.xlsx” (tab “Plot Series”). Code that creates the figure: “Figure 16 - Expectations Anchoring.do” Code that estimates the expectations process: Figure 16 code.R (see instructions in file “instructions - Figure 16 Code.docx”).
* **Figure 17.** “Figure 17 - SEP.do” Produces chart data, saved to Figure 17.xls.
* **Figure 18.** “Figure 18 - Simulation.do” Produces chart data, saved to Figure 18.xls.
* **Figure 19.** Panel A: “Figure 19 - IMF.do” Produces chart data, saved to Figure 19 - IMF.xls.

Panel B: “Figure 19 - HigherU.do” Produces chart data, saved to Figure 19 - HigherU.xls.

* + Note: Run the code for Panel A right before running the code for Panel B. Also, for Figures 17 and 19, the key to the results is as follows (for the 6 lines shown in the figures):

1 Pessim. BC, expectations revert

2 Pessim. BC, expectations drift (gamma=0.98)

3 Pessim. BC, expectations drift (gamma=0.94)

4 Optim. BC, expectations revert

5 Optim. BC, expectations drift (gamma=0.98)

6 Optim. BC, expectations drift (gamma=0.94)