Replication Files
"A Measure of Trend Wage Inflation"

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This folder contains the Matlab and Stata scripts to reproduce all the calculations, figures, and tables in the paper and supplemental appendix. Below is a detailed description section by section of the scripts, inputs, and outputs. If you find these programs useful, please consider citing the paper:

> Almuzara, Martín, Richard Audoly, and Davide Melcangi. *A Measure of Trend Wage Inflation*. Journal of Applied Econometrics, Forthcoming.

The data files are provided in the `data` folder. Alternatively, the CPS data can be constructed with the programs in the `build_cps_series` folder (see below). CES and other macro series can be directly downloaded from FRED.

Section 2: Data Figure

- **Figure 1** (`Fig1_wage_inflation_aggregate.eps` in the `figures` folder) is produced by the script `sec2_plot_wage_data.m`.
  - Inputs:
    - `wage_inflation_monthly.csv`
    - `wage_inflation_quarterly.csv`
  - Both input files are in the `data` folder.

Section 3: Validation Exercise

- **Table 1** (`Tab1_RMSEs.xlsx` in the `tables` folder) is produced by the scripts `sec3_validation_estimation.m` and `sec3_validation_forecasts.m`.

  - Run sec3_validation_estimation.m first to produce the pseudo-real-time model estimates of the trend.
  - This script takes as input the industries cut in the data folder.
  - Next, run sec3_validation_forecasts.m for the forecast comparison.
  - This script imports wage_growth_forecasts.csv, which contains the data to compute random walk forecasts.

Section 4: Empirical Analysis

- **Figure 2** (Fig2_trend.eps and Fig2_decomposition.eps in figures/industries) is produced by sec4_estimation_CPS.m.
  - Inputs: various data cuts (industries, occupation, education, region, wage_quartile, age, gender, race) in the data folder.
- **Figure 3** (Fig3_labor_market_YYYY.eps, where YYYY is 2001, 2007, and 2021, in the figures folder) is produced by sec4_plot_labor_market.m.
  - Input: labor_market_monthly.csv in the data folder.
- **Table 2** (Tab2_monthly.tex and Tab2_quarterly.tex in the tables folder) are generated by the program sec4_correlations.do.
  - Input: monthly_series.csv, quarterly_series.csv, and twin_series.csv in the data folder.
- **Table 3** (Tab3_episodes_contribution.xlsx in the tables folder) is generated as a by-product of the program sec4_estimation_CPS.m.

Supplemental Appendices

Appendix C: Monte Carlo Simulations

- **Figure C1** (Fig_C1_M.eps, where M is 1, 2, and 3, in testing/baseline and testing/nocommon) is produced by suppC_MC_simulation_baseline.m and suppC_MC_simulation_nocommon.m.

Appendix D: Additional Empirical Results

- **Figure D1** (FigD1_sector_trend_M.eps in figures/industries) and **Figures D2-D5** (FigD2_sector_tvp_M.eps also in figures/industries) were already produced by sec4_estimation_CPS.m.
- **Figure D6** (FigD6_episodes_change.eps in the figures folder) is generated by the script suppD_plot_bar_chart.m, which needs sec4_estimation_CPS.m to run first.

Appendix E: Robustness Checks

- **Figures E1-E2** (FigE1_trend.eps and FigE1_decomposition.eps in folders figures/industries_average and figures/industries_unweighted) are produced by suppE_estimation_CPS.m.
- **Figure E3** (FigE3_trend.eps and FigE3_decomposition.eps in the folder industries_flexible) is produced by suppE_estimation_flexible.m.
- **Figure E4** (FigE4_variance_samplesize.eps in the figures folder) is generated by suppE_plot_variances.m which needs suppE_estimation_CPS.m to be run first.

Appendix F: CES Data Estimation

- **Figure F1** (FigF1_trend.eps in figures/CES) was already generated as a by-product of sec4_estimation_CES.m.

Appendix G: Longer CPS Sample Estimation

- **Figure G1** (FigG1_compare_trend.eps, FigG1_compare_common.eps, and FigG1_compare_specific.eps in the figures/industries_long folder) is produced by suppG_estimation_CPS_long.m.
  - This script requires sec4_estimation_CPS.m to run first.
  - Input: industries_long data cut in the data folder.

Additional Material: CPS Series Programs

The `build_cps_series` folder contains programs deriving the CPS series used as inputs in the estimation. These series are already stored in the `data` folder, so there is no need to run these programs to replicate the paper's results. They are included for completeness. Refer to the `readme` file in the folder for details.