Is It All About Globalization?

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- Question has motivated recent research
  - Obstfeld (2019), Ha, Kose and Ohnsorge (2019)
  - Forbes (2019): “Inflation Dynamics: Dead, Dormant or Determined Abroad”, Sept. BPEA

- The answer: Some of it (but not all) is about globalization
  - Particularly for CPI inflation & the cyclical component of inflation over the last decade
  - But less so for core and wage inflation

- Supported by results from 3 approaches (Forbes, 2019)
  - Principal components
  - Augmented Phillips curve regressions
  - Trend-cycle analysis
Principal Components of Different Inflation Measures over Time

Figure 1a: Percent of Variance of Four Inflation Measures Explained by 1st Principal Component
Augmented Phillips Curves

- Domestic variables only:
  \[ \pi_{it} = \beta_1 \pi_{it}^e + \beta_2 \pi_{it}^L + \beta_3 \text{SLACK}_{it}^D + \alpha_i + \epsilon_{it} \]

- “Triangular”/Supply shock (Gordon….)
  \[ + \gamma_1 \text{ImpPrices}_{it} \]

- Global Model
  \[ + \gamma_1 \text{Oil}_{it}^W + \gamma_2 \text{Comm}_{it}^W + \gamma_3 \text{ER}_{it} + \gamma_4 \text{SLACK}_{t}^W + \gamma_5 \text{GVC}_{t}^W \]

- Global Model with “flattening”
  \[ + \beta_3 (\text{SLACK}_{it}^D \ast \text{ImpSh}_{it}) \]
Rolling Regressions: Median Errors
Actual vs. Predicted CPI Inflation

Median values of the absolute value of the difference between reported and predicted inflation based on coefficients from 8-year rolling regressions of 3 models. Sample size is limited to countries/periods with import price data to maintain a consistent sample.
Rolling Regressions: Median Errors
Actual vs. Predicted Core & Wages

Median values of the absolute value of the difference between reported and predicted inflation based on coefficients from 8-year rolling regressions of 3 models. Sample size is limited to countries/periods with import price data to maintain a consistent sample.
Which Global Variables Matter?

Estimated Contributions for US CPI
Final Thoughts

- Key results confirmed in trend-cycle analysis
  - Globalization increasingly important for CPI (and cyclical) inflation
    - But wage, core & underlying trend inflation still largely a domestic process
  - Key global effects for CPI inflation
    - Import exposure has contributed to some (but not all) of “flattening”
    - Other effects of globalization work through multiple channels—effects vary by time
Role of Commodities?

Figure 1b:
Principal Components vs. Commodity Price Volatility

- CPI (left axis)
- Core CPI (left axis)
- Commodity Price Volatility (right axis)
Role of Global Slack?

Alternate Measures of Global Slack
(as % of global GDP)

- OECD Measure
- IMF Measure
- Principal Component

Role of Global Value Chains?
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