Is It All About Globalization?

Kristin Forbes
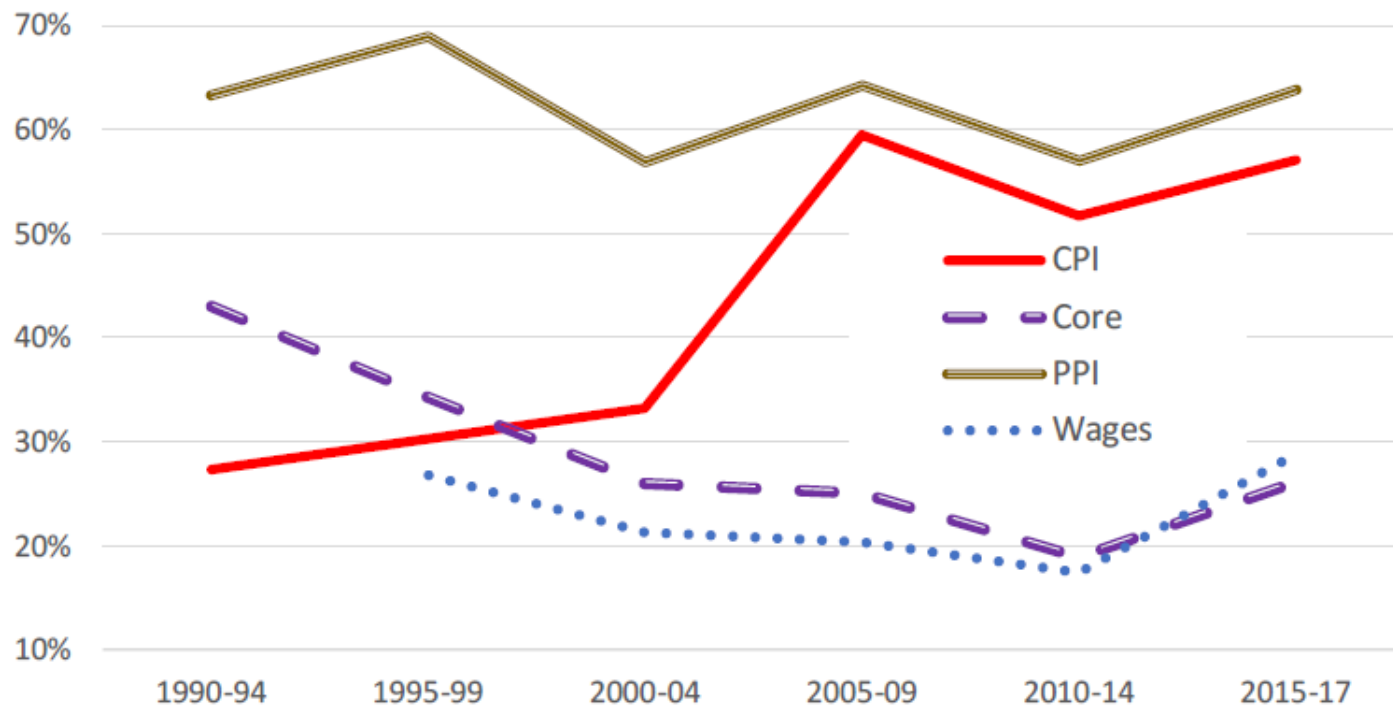*MIT-Sloan School, NBER & CEPR*

Is it All About Globalization?

- **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:

$$\pi_{it} = \beta_1 \pi_{it}^e + \beta_2 \pi_{it}^L + \beta_3 SLACK_{it}^D + \alpha_i + \epsilon_{it}$$

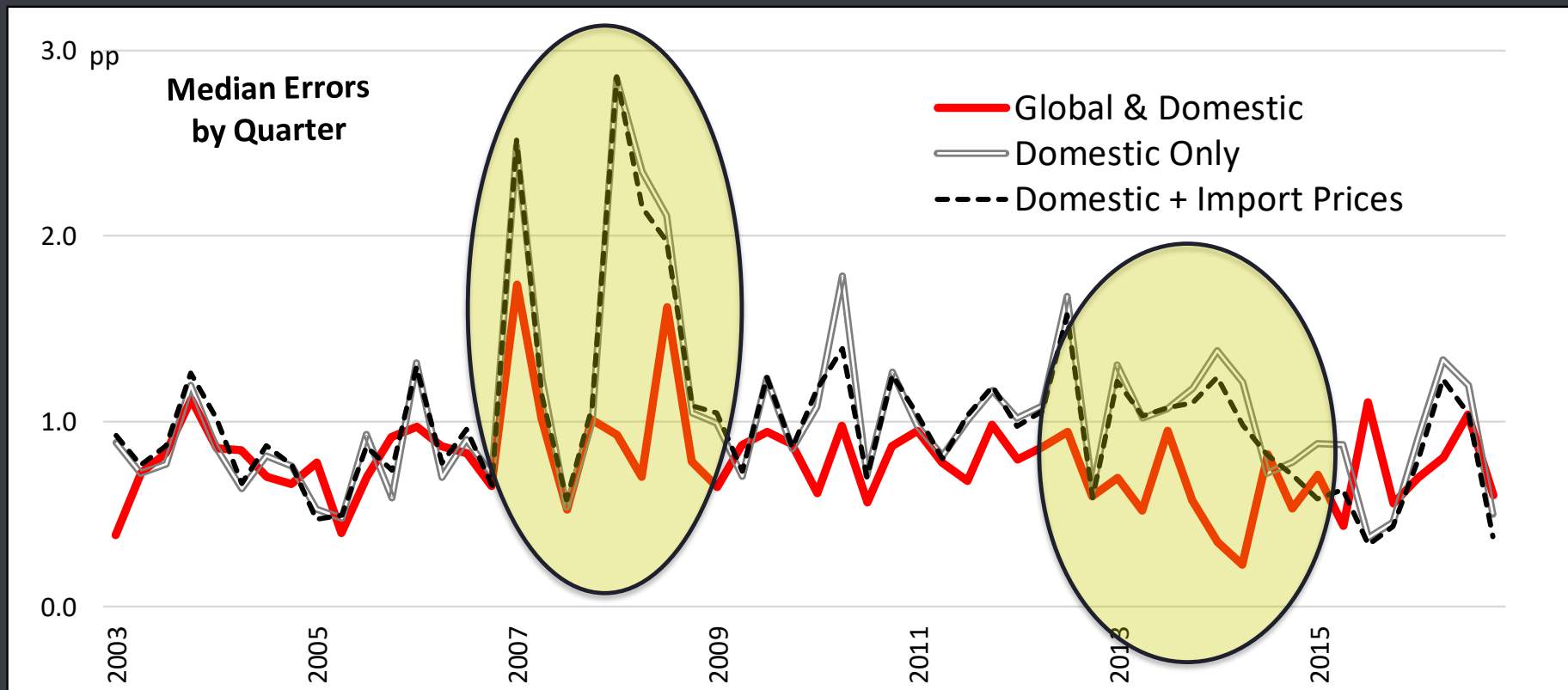➢ "Triangular"/Supply shock (Gordon….)

$$+\gamma_1 ImpPrices_{it}$$

➢ Global Model

$$+\gamma_1 Oil_{it}^W + \gamma_2 Comm_{it}^W + \gamma_3 ER_{it} + \gamma_4 SLACK_t^W + \gamma_5 GVC_t^W$$
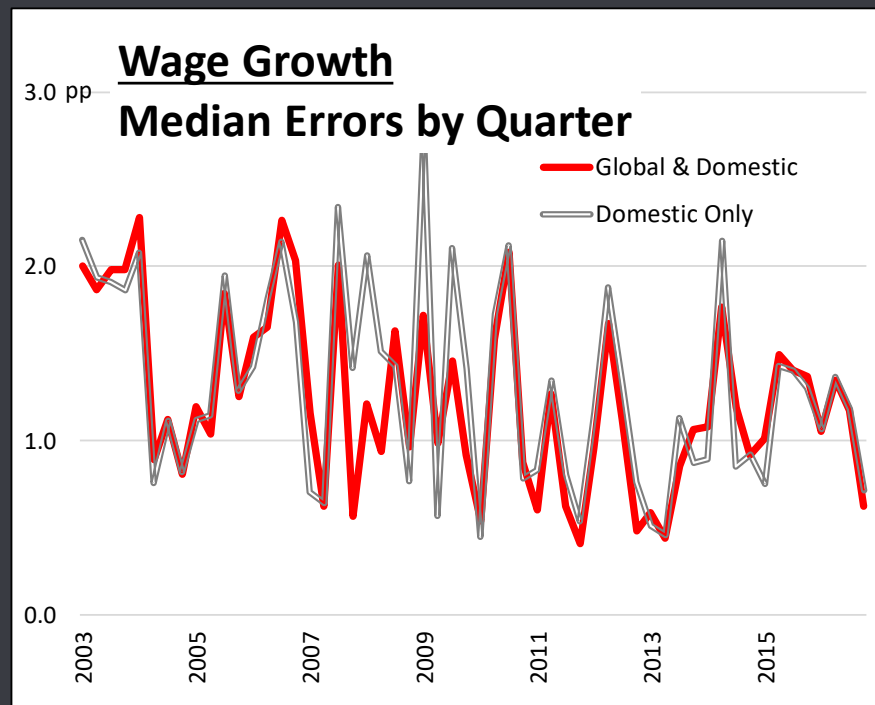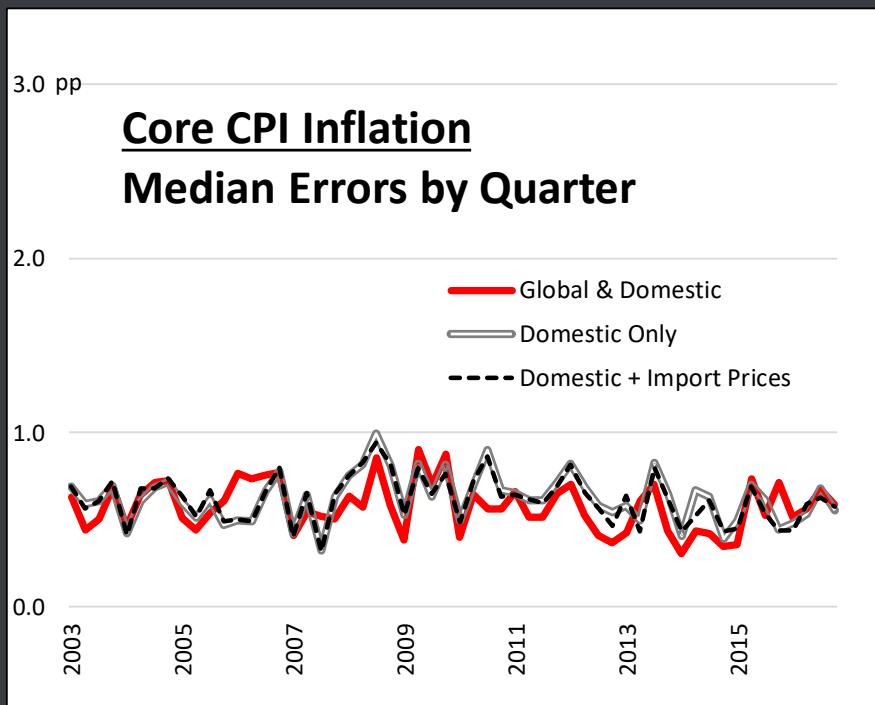
➢ Global Model with "flattening"

$$+\beta_3 (SLACK_{it}^D * ImpSh_{it})$$

Rolling Regressions: Median Errors
Actual vs. Predicted CPI Inflation

Median Errors by Quarter

Legend:
- Global & Domestic
- Domestic Only
- Domestic + Import Prices

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.
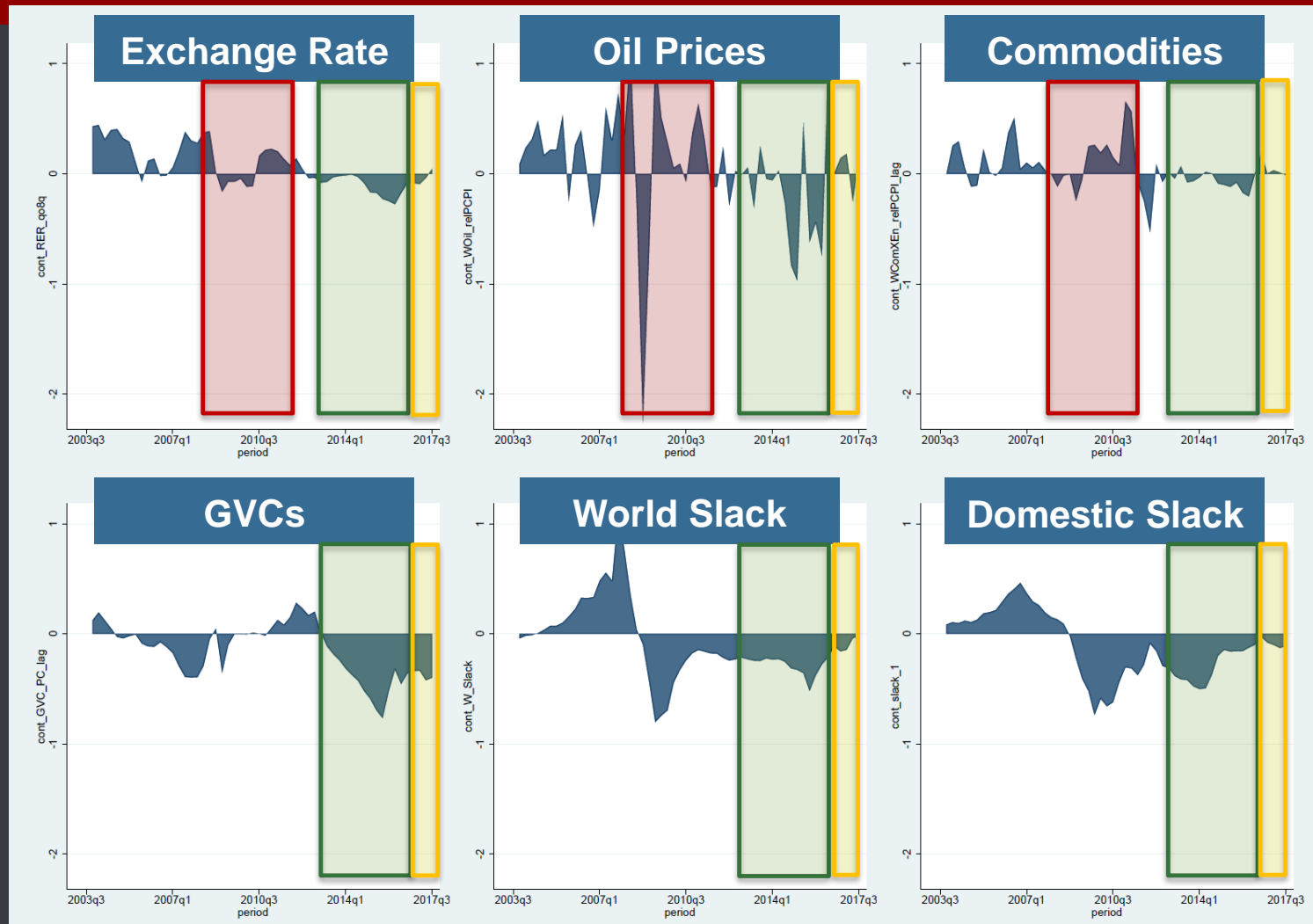
Which Global Variables Matter?
Estimated Contributions for US CPI
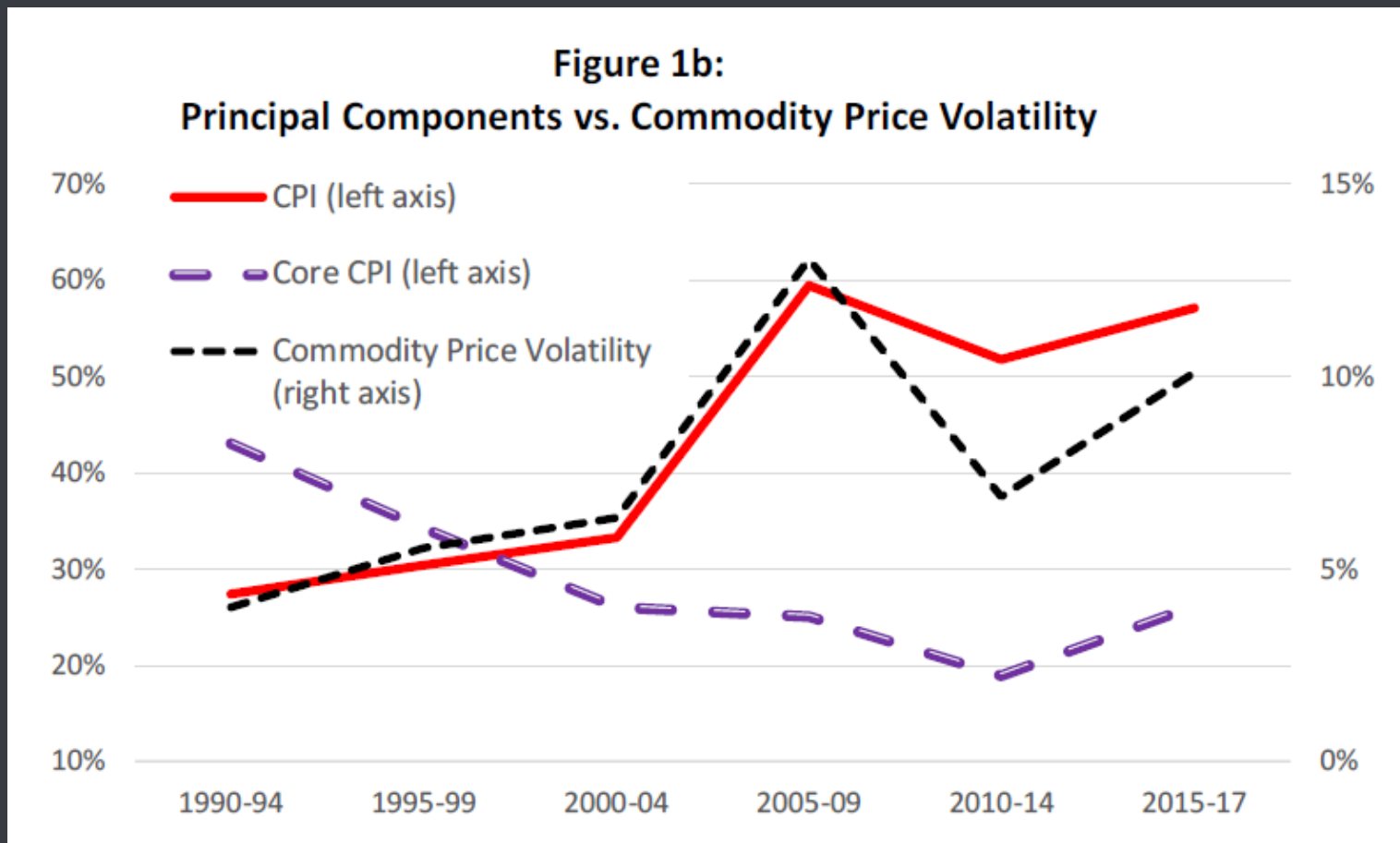
Final Thoughts

- **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"
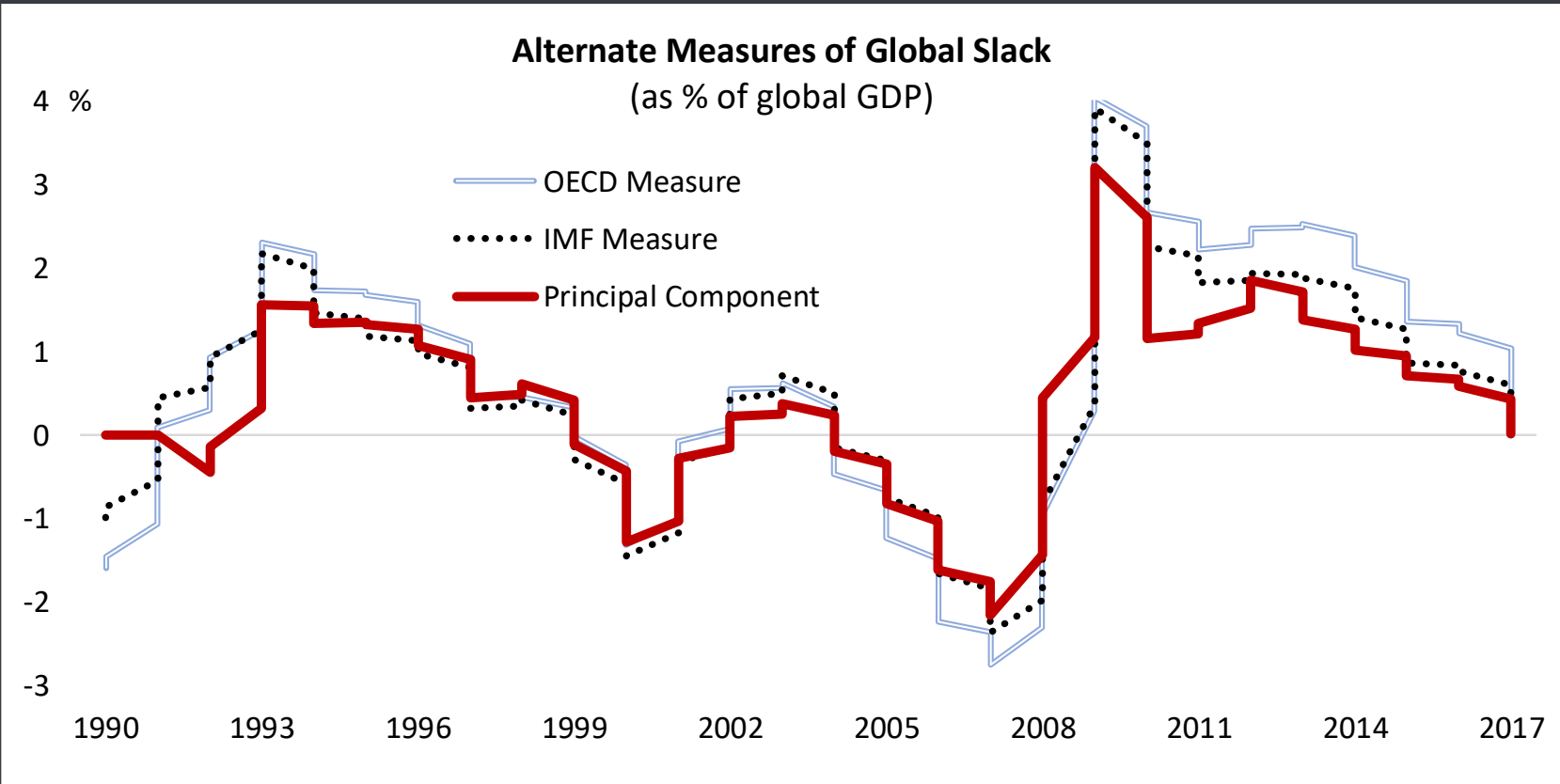 - Other effects of globalization work through multiple channels—effects vary by time
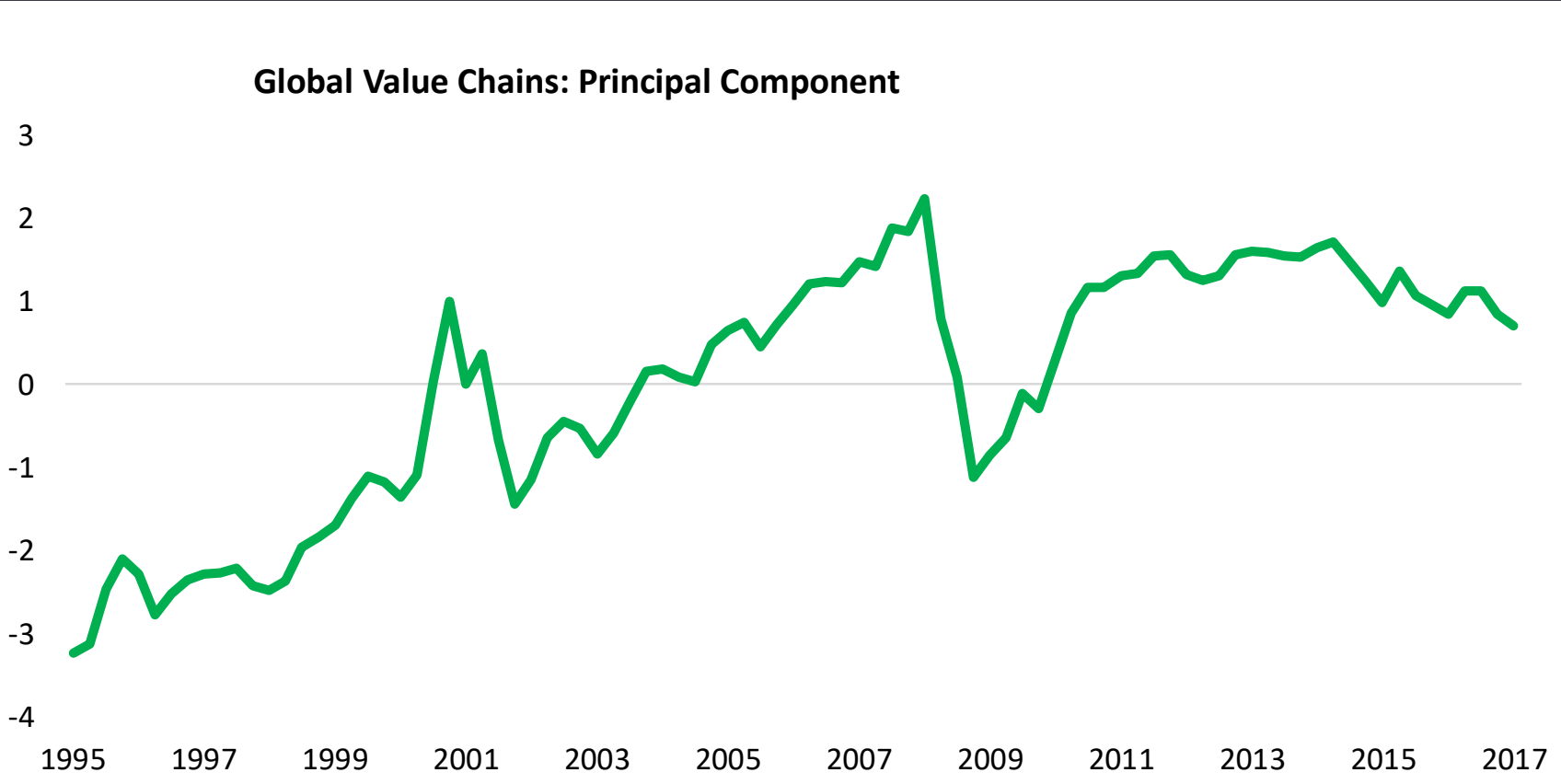
EXTRA

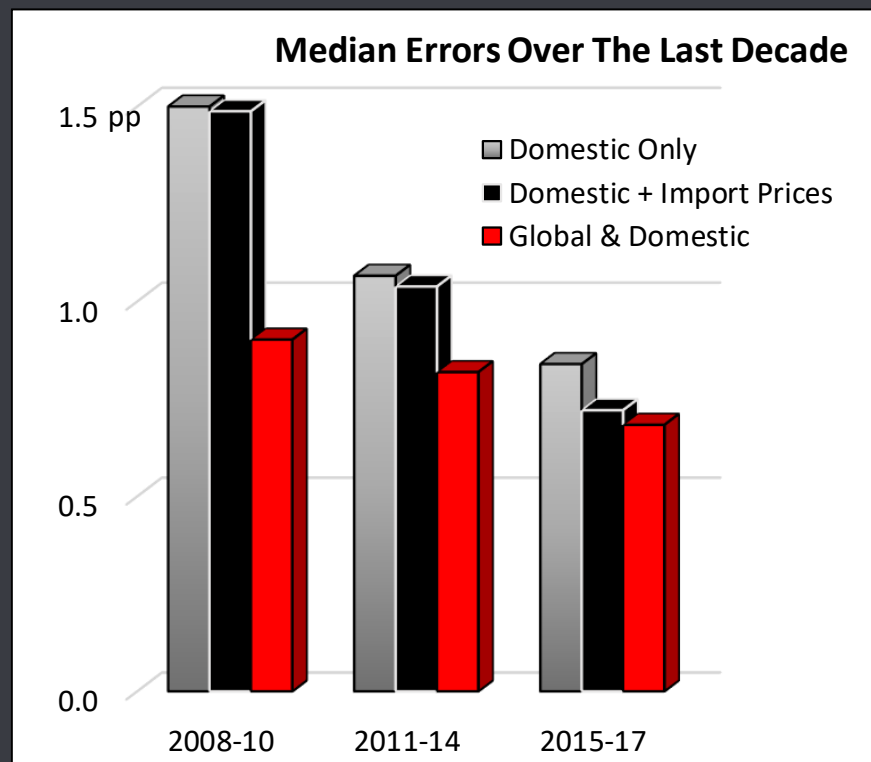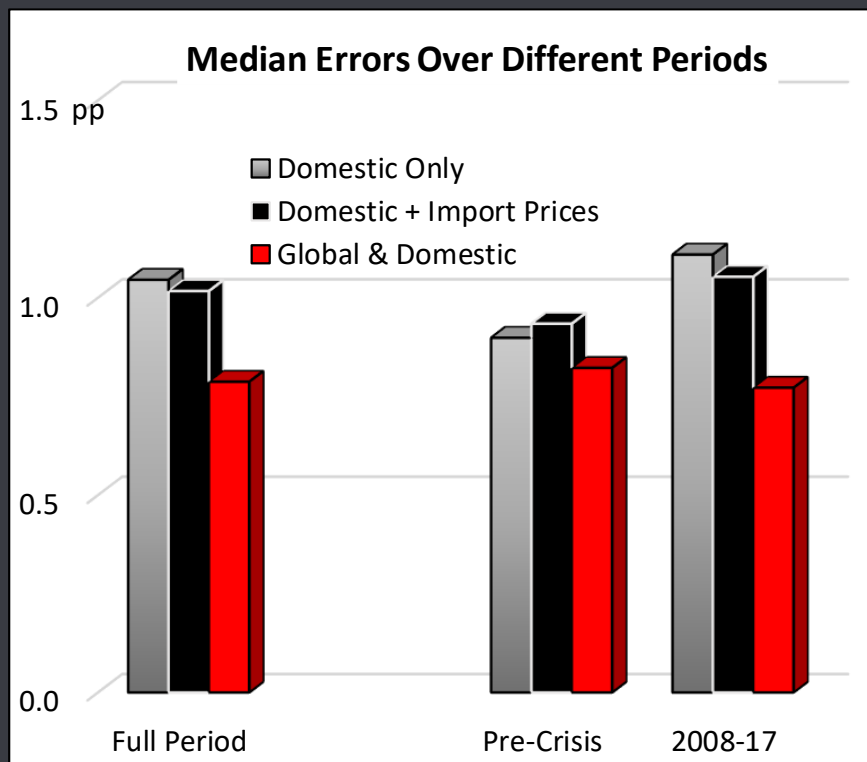# Role of Commodities?

Figure 1b:
Principal Components vs. Commodity Price Volatility

Role of Global Slack?

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

Role of Global Value Chains?

Global Value Chains: Principal Component

Rolling Regressions: Median Errors
Actual vs. Predicted CPI Inflation

Median Errors Over Different Periods

Legend:
- Domestic Only
- Domestic + Import Prices
- Global & Domestic

Y-axis: 1.5 pp, 1.0, 0.5, 0.0

X-axis categories: Full Period, Pre-Crisis, 2008-17

Median Errors Over The Last Decade

Legend:
- Domestic Only
- Domestic + Import Prices
- Global & Domestic

Y-axis: 1.5 pp, 1.0, 0.5, 0.0

X-axis categories: 2008-10, 2011-14, 2015-17

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.
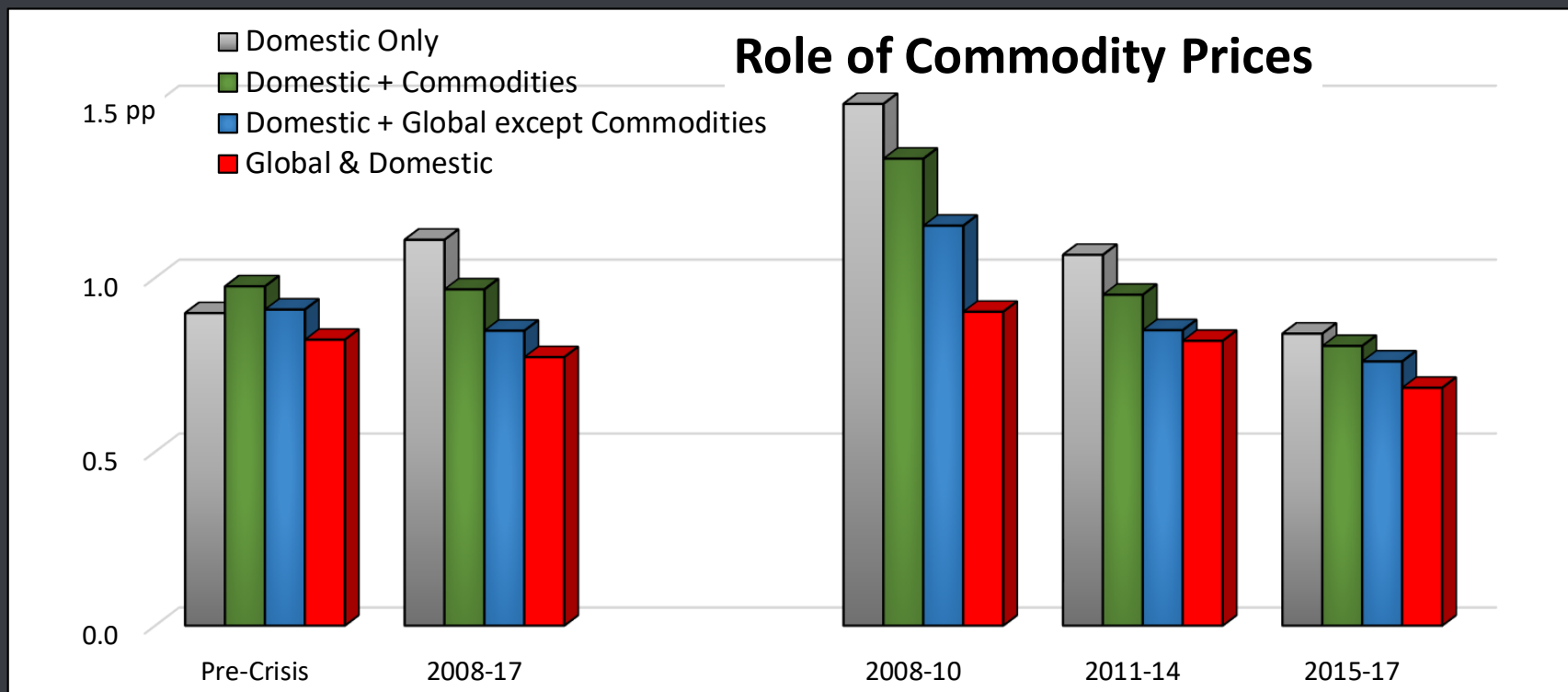
Rolling Regressions: Median Errors
Actual vs. Predicted CPI Inflation

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.