

# Has Globalization Changed the Inflation Process?

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# Has Globalization Changed the Inflation Process?

- ▶ Has the Inflation Process Changed?
  - ▶ Stock and Watson (2007, 2010), others
  - ▶ Has the “policy-relevant inflation process” changed? More on this later
- ▶ Has Globalization Changed the Inflation Process?
  - ▶ Global dimension must matter to begin with
  - ▶ Global factors must have evolved (“globalization”) along directions that matter for inflation
  - ▶ Has globalization changed the “policy-relevant inflation process”? More on this later
- ▶ Important question. Empirically testable
  - ▶ Challenge of telling other stories apart

# The Paper

- ▶ Global economy has changed over the last 20 years: increased trade flows, greater role for EME, commodity price fluctuations, global supply chain integration
- ▶ These dimensions of globalization can affect inflation dynamics: co-movements worldwide are more likely
- ▶ Current picture of inflation models
  - ▶ Rely heavily on domestic factors
  - ▶ Global factors a side show (if included at all)
- ▶ **The paper:** increasing importance of global integration and its role on inflation dynamics across countries

# Contributions

- ▶ Three different approaches to evaluate the role of global factors in inflation dynamics
  - ▶ Principal components
  - ▶ Phillips curve framework
  - ▶ Trend-cycle decomposition
  
- ▶ Analysis of the relative importance of global factors over time
  
- ▶ **Key message:** Global variables should no longer be ancillary to models of inflation dynamics
  - ▶ In addition, inflation models should allow for dynamic coefficients to accommodate the time-varying importance of global factors

# Some General Comments - 1

- ▶ Reduced-form approaches useful and interesting
  - ▶ PCA and Trend-cycle decomposition
  - ▶ But identifying channels of interest and telling them apart from others is a challenge
  - ▶ Phillips curve approach a good complement

## Some General Comments - 2

- ▶ Common strategy (PC & TC)
  - ▶ Pooled regressions
    - ▶ Rolling windows / split sample
  - ▶ Individual country regressions
    - ▶ Rolling windows / split sample
- ▶ Pooled regression results “more robust”
  - ▶ Country specific results more heterogeneous (not surprising)
  - ▶ Focus on “counts of statistical significance” of global factors. Possible “multiple testing” issues
  - ▶ Sometimes 32 obs to estimate 9 parameters...
- ▶ **Suggestion:** Focus on (unreported) point estimates; look for more flexible but still parsimonious specification for pooled regressions, with some common and some country-specific coefficients

## Some Specific Comments - Phillips curves

- ▶ Global output gap and other global variables: possible “reflexivity”
  - ▶ Would be interesting to see results for a panel of small open economies
- ▶ Country-specific foreign variables (e.g. trade weighted?) might be important (e.g. Bianchi and Civelli 2015)
- ▶ Random- versus fixed-effects? IV estimation of dynamic panel?
- ▶ What happens to “significance counts” when FX is counted as domestic variable?
  - ▶ Some results shown only for domestic, domestic + oil, global
  - ▶ In principle could use factor model or PCA to disentangle domestic vs global drivers of each currency against the US dollar, for example
- ▶ **Main comment:** specification “in between” fully homogeneous panel and single-country regressions may be very useful

# Some Specific Comments - Trend-cycle Decomposition

- ▶ Why estimate a trend and then run regressions with inflation on lhs and trend on rhs with an unrestricted coefficient?
  - ▶ Would like to see specifications where lhs features the cycle only (i.e.,  $\pi_t - \tau_t$ )
- ▶ Trend-cycle decomposition can benefit tremendously from inclusion of forecasts as observables
  - ▶ E.g. Nason and Smith (2016), Mertens and Nason (2018), Alves, Areosa and Carvalho (2018)
- ▶ Modeling horizon-specific frictions underlying survey forecasts is key (Areosa, Alves and Carvalho 2018)

# Has Globalization Changed the Inflation Process?

- ▶ Global dimension must matter to begin with
  - ▶ Convinced it does matter
- ▶ Global factors must have evolved (“globalization”) along directions that matter for inflation
  - ▶ Not yet convinced
  - ▶ Bianchi and Civelli (2015): Maybe because globalization has not yet induced significant enough changes, to the point of producing breaks in the inflation process. But their sample ends in 2006!
- ▶ **One possible route:** Yet more structure
  - ▶ Flexible yet parsimonious panel, but with drivers of inflation interacted with measures of possible relevance of globalization for each country (e.g., measures of financial and trade openness). This is in the spirit of Bianchi and Civelli (2015), but exploring panel of Phillips curves as opposed to VAR.

# Implications for (Monetary) Policy

## Some thoughts

- ▶ Has the inflation process changed? Has globalization changed the inflation process?
- ▶ Has the “policy-relevant inflation process” changed? Has globalization changed the “policy-relevant inflation process”?
- ▶ What do I mean by “policy-relevant inflation process”?
  - ▶ Part of inflation that is subject to the influence of monetary policy
  - ▶ Hence, relatively more interested in possible effects on core measures and trend, as opposed to headline inflation
- ▶ Perhaps can rephrase questions as:
  - ▶ “Has the response of inflation to monetary policy over the relevant horizon changed?”
  - ▶ “Has globalization changed the response of inflation to monetary policy over the relevant horizon?”