Russia-China Economic Observatory

Chinese Economic Activity, Exchange Rates and Russia-China Trade: Evidence Consistent with an Asymmetric Structural Reorientation after 2022

Research question

How are Chinese economic activity, the CNY/RUB exchange rate, and external commodity prices linked to Russia-China trade? Did these relationships change after 2022?

What I did

I built an 81-month macroeconomic dataset (January 2019-September 2025) using official GACC trade data and an analytical CNY/RUB monthly series constructed from Bank of Russia daily fixings. The analysis combines descriptive statistics, lag comparisons, OLS, Newey-West HAC inference, seasonal controls, interaction terms, structural-break tests, stationarity checks, and influence diagnostics. Exports and imports are modeled separately, and findings are ranked by robustness rather than by p-value alone.

Methods

Python • Time-series • OLS • Newey-West HAC • Lag analysis • Structural-break analysis • Robustness/influence diagnostics

Key findings

1) Average monthly bilateral trade value increased by 83.7% after January 2022. 2) The apparent PMI(t-3) export relationship is not robust to influential COVID-period observations. 3) Brent is the most consistent export correlate in the full-sample seasonal specifications but is not significant in the strict COVID-excluded sample. 4) Structural-instability evidence is more persistent in the import equations; the post-2022 change in FX sensitivity is suggestive but imprecisely estimated.

Research discipline

Observational study: coefficients are interpreted as associations, not causal effects. Results that are sensitive to seasonal specification, influential observations, sample exclusions, or multicollinearity are labeled accordingly.

Links

Research paper, frozen dataset, analytical workbook, figures, source-provenance files, and reproducibility code are included in this release.

The paper uses a frozen January 2019-September 2025 data vintage. Newer observations should be treated as a later Observatory or out-of-sample update rather than appended silently to the original estimation sample.