Comment on "Industry-specific Exchange Rate Volatility and Intermediate Goods Trade in Asia" by SATO Kiyotaka, SHIMIZU Junko, Nagendra SHRESTHA and Shajuan ZHANG"

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Road Map

- Summary of the paper
- Contributions
- Comments

I. Summary of the paper

- The paper empirically analyzes the effect of exchange rate volatility on intra-Asian trade of intermediate goods during 2003-2010 for 6 industries and 9 Asian countries.
- Construct industry-specific bilateral exchange rates.
- Estimate an augmented gravity equation that include exchange rate volatility and world demand for final goods.
- Exchange rate volatility is found to reduce trade in intermediate goods for only General Machinery and Electrical Machinery sectors.
- No significant impact for other sectors.
- Contrast with earlier evidence that find significant trade deterrance effect of exchange rate volatility.
- The authors conjuncture that the two industries that are significantly affected are characterized by a large share of arm's length trade.

- One of the first papers investigating the impact of exchange rate volatility on production fragmentation(vertical specialization) within Asia.
- Construct a new database of industry-specific exchange rates for 9 Asian economies.
- Enriches the evidence on the trade effect of exchange rate volatility by extending the investigation to trade in intermediate goods.
- The econometrics is carefully implemented.

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III.Comment (1)

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  - the impact of exchange rate volatility on trade is usually found to be negative for developing countries(Grier and Smallwood, 2007).

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- The results are kind of surprising to me because:
  - the impact of exchange rate volatility on trade is usually found to be negative for developing countries(Grier and Smallwood, 2007).
  - the industries under investigation are somewhat similar in nature.

III.Comment (2): Intra/Inter-firm trade

- Is the difference across industries driven by the importance of arm's length/intra-firm trade?

Share of exports by FIE and non-FIE in China, 2007

industry	export share of FIE	export share of non-FIE
Transport equipment	0.50	0.50
General equipment	0.60	0.40
Special purpose equipment	0.61	0.39
Electrical machinery	0.69	0.31
Office machinery and precesion instrument	0.88	0.12
Communication & Electronics	0.93	0.07

Data source: Annual Survey of Industrial Firms, NBS

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- General equipment and electrical machinery may not neccesarily be characterized by a high share of arm's length trade.

III.Comment (3): Exchange Rate Volatility

- The lack of significance might be caused by the fact that exchange rate volatility lack cross-time variation.

Industry-specific real exchange rate volatility: Standard deviation						
Current year (12 months)						
Mean	0.024	0.030	0.027	0.032	0.031	0.022
S.D.	0.011	0.018	0.017	0.017	0.018	0.010
Min	0.007	0.008	0.008	0.008	0.007	0.006
Max	0.071	0.115	0.110	0.111	0.115	0.078
Current year and previous year (24 months)						
Mean	0.024	0.032	0.029	0.033	0.033	0.023
S.D.	0.010	0.016	0.016	0.015	0.016	0.009
Min	0.007	0.009	0.009	0.009	0.009	0.008
Max	0.062	0.088	0.083	0.084	0.088	0.068
Current year and previous two years (36 months)						
Mean	0.025	0.034	0.030	0.034	0.034	0.025
S.D.	0.009	0.015	0.016	0.015	0.016	0.010
Min	0.008	0.010	0.010	0.009	0.010	0.009
Max	0.054	0.083	0.076	0.077	0.083	0.059
Previous year, current year and next year (36 months)						
Mean	0.025	0.032	0.029	0.034	0.033	0.024
S.D.	0.009	0.015	0.015	0.014	0.014	0.009
Min	0.008	0.010	0.011	0.010	0.011	0.009
Max	0.054	0.083	0.076	0.077	0.083	0.059

III.Comment (3): Exchange Rate Volatility

- exchange rate volatility: lack of cross-time variation?

Industry-specific real exchange rate volatility: GARCH(1,1) Model						
Current year (12 months)						
Mean	0.025	0.033	0.030	0.034	0.034	0.024
S.D.	0.009	0.013	0.013	0.012	0.013	0.008
Min	0.011	0.012	0.011	0.013	0.011	0.009
Max	0.057	0.084	0.080	0.080	0.084	0.063
Current year and previous year (24 months)						
Mean	0.025	0.033	0.030	0.034	0.034	0.024
S.D.	0.009	0.013	0.013	0.012	0.013	0.007
Min	0.011	0.013	0.011	0.013	0.011	0.011
Max	0.056	0.079	0.079	0.079	0.079	0.062
Current year and previous two years (36 months)						
Mean	0.025	0.034	0.030	0.034	0.034	0.025
S.D.	0.008	0.012	0.013	0.012	0.013	0.007
Min	0.010	0.013	0.012	0.014	0.011	0.011
Max	0.050	0.073	0.072	0.072	0.074	0.057
Previous year, current year and next year (36 months)						
Mean	0.025	0.033	0.030	0.034	0.034	0.024
S.D.	0.008	0.012	0.013	0.011	0.012	0.007
Min	0.011	0.013	0.012	0.014	0.011	0.011
Max	0.049	0.073	0.072	0.072	0.073	0.053
Obs.	720	720	720	720	720	720

III.Comment(4): Gravity issues

- "zero trade" problem
    - A large number of countries do not trade with each other in many products.
    - Ignoring these "zero" creates bias(ignores the "extensive margin" of trade).
    - Solution: add "zero" back and specify a Heckman two-step model.
    - might not be a big issue in this paper due to the level of aggregation of the data.

- Log of gravity (Silva and Tenreyro, 2006)

III.Other (minor) comments

- Financial dependence of the sector play a role(Hericourt and Poncet,2013)?
- GDP or GDP per capita?
- Might also try to include exchange rate itself.