Referee Report on

Glenn Magerman, Zuzanna Studnicka, and Jan Van Hove (2015). Distance and Border Effects in International Trade: A Comparison of Estimation. Economics Discussion Papers, No 2015-69, Kiel Institute for the World Economy.

http://www.economics-ejournal.org/economics/discussionpapers/2015-69

1. Summary

This is an interesting paper. Many trade papers use gravity framework and therefore estimate standard controls such as distance and border adjacency variables. Usual findings are that the distance coefficient is negative and close to unity, and the border coefficient is normally negative but there is no agreed average level of it though. Depending on used an estimator, the magnitude, and the signs, of the coefficients could change. This study argue that the sensitivity of the distance and border effects to the estimation method has not been tested fully, and this paper attempts to do that.

This paper also covers some of the common problems of coefficient estimation with simple OLS method which are omitted variable bias, zero (or unreported) trade flows, parameter weighting loss function related problems. They also discuss some of existing solutions to deal with the problems in estimation process such as inclusion of fixed effects and use of other methods (PPML) that takes into account of zero or unreported observations.

For empirical analyses, the authors use linear and non-linear methods of estimation with BACI data, which is bilateral, and at product level, and other standard gravity controls available via CEPII.

Gravity estimation with several methods for the distance coefficient show the following pattern of estimates: GPML>LSDV/BB>PPML (which is also in line with other findings). Figure 1 shows that distance effect over time stays more or less the same. Figure 2 shows that with reduction of sample size, estimated coefficients for distance becomes smaller.

The authors were also interested in estimating border bias for separate regions of the world, in particular contracting border effect of inter-continental vs intra-continental trade flows. They use dummy variables as proxies for continental ‘home’ bias and for border adjacency. Using the same ‘common’ estimators, they find that border effect is

quite sensitive to the choice of estimation tool. The results for border change from one method to another. After controlling for all other effects, they find that Europe and Asia are more globally open to trade while Pacific regions trade more within its region. They also estimate with simple OLS without controlling for MTRs to show the estimation bias where results for Asia show that it trades more within the region.

2. Main comments

- **pp. 6:** One of estimation issues is the loss function. However, it seems to me that there is more needs to be discussed on how the assumed function cause the estimation problem.

- **table 2:** I notice that GDPs aren't present or reported in the table, except OLS and BB cases. However, in the text, I do not find discussion on the logic of exclusion of economic sizes from the regressions, nor I find explanation on elimination of impact of monadic terms. I normally include GDPs even when I use country level fixed effects. Relevant comment regarding columns that include GDPs but exclude fixed effects. I think that exclusion of fixed effects in OLS and BB cases makes GDP coefficients higher than they should be (because they observe some of other monadic effects), and GDPs cannot control for monadic factors on their own.

3. Minor issues

- **pp. 4:** Typo mistake in the bottom paragraph: "From this literature review it appears that the sensitivity of the distance and border effects in trade have been ..."
- **pp. 6:** Why $\varepsilon = \exp(X\beta)\eta$ in eq. 4? Please check this.

- **pp. 10:** Is Santos Silva full name or last name? Santos Silva and Tenreyro (2006).

- **pp. 18:** Another typo in "… Head and Mayer (2014) ague that…"

-It is worth checking for small typos throughout the paper.

4. Final remark

Overall, the research topic and questions are interesting enough to motivate readers and the theoretical and econometric components are clearly interpreted with economic intuitions. Nevertheless, I would also looked at border and distance effects within a

country and contrast with its trade with outside of country trade. Jim Anderson in his speech in ETSG this year used bilateral trade data for Canada to estimate impact of NTBs on trade among provinces and their trade with the USA. I know that BACI wouldn't allow this unfortunately but still I think that such additional analyses could straighten the work.