

Referee report on "Effect of Distance on Trade under Slope Heterogeneity and Cross-Correlated Effects"

by Oleksandr Lugovsky and Alexandre Skiba

In my view this paper is an interesting contribution to the literature on the estimation of gravity models. The paper is well written and comes up with interesting and relevant conclusions. Maybe the authors can elaborate on the following issues to make some of their arguments clearer.

1. It seems the authors consider a special case of Pesaran (2006), namely $d_j = 1$ and $f_j = 0$. If that's the case, this should be spelled out explicitly. Also, in this case there is no need to introduce the general model of Pesaran (2006) in full length.
2. Eq. (3) given as

$$x_{it} = A'_i d_j + \Gamma'_i f_j + v_{ij}$$

specifies the process for the explanatory variables following Pesaran (2006). In the paper, it is not clear if the authors are assuming Eq. 3 for x_{it} . If it is the specification by Pesaran (2006) given in Eq. 3, one may ask whether this specification is justified for gravity variables like the log of distance, contiguity etc. Note many of these variables are symmetric, i.e., $x_{ij,k} = x_{ji,k}$ for some variable with index k . Also Assumption 1 in Pesaran (2006) states that (d_j, f_j) are random. In general, a more detailed discussion is needed which the assumptions of the considered model hold for explanatory variables of gravity equations.

3. It is not entirely clear in the text (especially without reading Juhl and Lugovsky, 2014) what is actually assumed about β_i . It seems the authors assume $\beta_i = \beta + \eta_i$, $E[\eta_i | x_{it}] = 0$.
4. The authors are silent on how they calculated the standard errors of their CCEMG-estimates.
5. The distribution of the estimated β_i would be interesting and possibly informative. Maybe this could be discussed in more detail.
6. Is the present approach able to account - in some way- for both exporter and importer specific trade resistance terms? Given Eqs. 7 and 8 this does not seem to be the case, but an approximation may be possible.

7. The estimated coefficients of GDP per capita and remoteness seem rather unstable across the chosen estimators (specifically for importer FE and Importer CCEMG). Maybe the authors can comment on this.
8. It is not easy to understand Figures 1 and 2. Maybe the authors can elaborate on what exactly drives the patterns found in these figures.