Referee Report on

Oleksandr Lugovskyy and Alexandre Skiba (2014). Effect of Distance on Trade under Slope Heterogeneity and Cross-Correlated Effects. Economics Discussion Papers, No 2014-30, Kiel Institute for the World Economy. http://www.economics-ejournal.org/economics/discussionpapers/2014-30

Overview: The primary objective of this paper to provide preliminary evidence of slope heterogeneity in gravity models. From an empirical perspective, there is much work needs to be done in this area as the topic is not well explored. Unlike Baier, Bergstrand, and Clance (2014 forthcoming) who allow for slope heterogeneity using "mixed" models, these authors explore slope heterogeneity using Pesaran's cross-correlated effects mean-group (CCEMG) estimator. As the authors state there are some benefits from using this approach, but it does come at a cost -- you can only "control" for either importer or exporter effects (not both). That said, I find the results moderately interesting. There are a few things the authors can do to improve the quality of the paper.

More Detailed Comments:

Introduction and Motivation: For the goals of this paper, the introduction and the motivation are nicely done. They authors state most *gravity models* assume constant slopes and they provide motivation as to why we might expect to see slope heterogeneity – endogenous transportation costs.

Empirical Results: The graphs that present the non-parametric results are interesting it is especially notable that the non-parametric estimates of longer distances converge and the end up at roughly equal to the OLS point estimates. There are some things I think the authors could show that would help to highlight the findings in the paper:

- I would like to seethe non-parametric OLS result and CCEMG estimators using log distance plotted over time. There are a lot of papers that have documented the increase in the distance elasticity over time, I am curious to see if the CCEMG estimator looks similar.

- Also I am curious how the contiguity variable changes over time. I would like to see this graphed as well.

- How do the results change if the non-parametric choice of distance changes? The authors could provide some sensitivity analysis by using a Fibonacci sequence to determine the length of the stretches.

There are a few other aspects of the paper that I think the authors could improve the paper by improving the exposition.

- It is not clear that slope heterogeneity will make fixed-effects estimation biased/inconsistent. There are several examples labor studies and other studies that allow for slope heterogeneity and fixed effects. What features of the gravity *model* and slope heterogeneity make fixed effects biased? Or is it simply an approach that would allow for heterogeneous slopes.

- The authors state that the results are related to the literature on zero trade flows, but they are not at all clear how this methodology addresses that issue.

- While putting in *means* of variables is similar to correlated random effects, the authors could provide a sharper explanation regarding why this method yields consistent estimates.