

Comments on Magerman, Studnicka & van Hove *Distance and Border Effects ...*

The paper compares estimation techniques to determine distance and border effects within a gravity model framework. The five alternative estimation techniques are based on:

1. OLS and variants to address the linear or non-linear multilateral trade resistance term (i.e. successors to Anderson & van Wincoop, 2003)
2. Poisson Pseudo Maximum Likelihood and a variant to address zero trade values and heteroskedasticity (i.e. successors to Santos Silva and Tenreyro, 2006)

### **Distance Effects**

This is a useful exercise, with the reassuring conclusion that the distance effect is negative and statistically significant across all specifications. Depending on estimation technique, the coefficients vary between -0.5 and -1.4 (Table 2), with some apparently minor fluctuations within the period of study, 1998-2011 (Figure 1). Discussion of reasons for the fairly large range, especially between the two ML estimates (-1.4 with Poisson Pseudo Maximum Likelihood and -0.5 with Gamma Pseudo Maximum Likelihood), would be a useful extension.

A further robustness test would have been to vary the control variables. Adjacency, Common Language, Colonial Ties and RTA membership feature in all runs. These are commonly used controls, but in the gravity literature the choice of controls does vary; the selection obviously affects results, and the interesting question is the size of this effect.

### **Borders**

Ever since McCallum (1995), the border effect has been acknowledged to be large. Anderson & van Wincoop (2003) showed that with more appropriate estimation techniques the border effect was smaller than McCallum's estimate, but still powerful. Also, as the paper's literature review shows, there is evidence of a continuity of "border effects" from local to provincial to national borders.

When Section 4.2 of the paper reports "border effects" it is in the idiosyncratic form of distinguishing between intra-continental and inter-continental trade across five continents. The results are highly sensitive to the estimation technique, in some cases shifting from statistically significant positive coefficients to statistically significant negative coefficients. In contrast to the distance results discussed above, this suggest that estimation techniques make an important difference.

However, this exercise needs to be motivated. The "border effect" is universally seen in terms of national borders, with a useful hypothesis being whether the concept should be adjusted for the European Union (or other customs unions/ economic unions), but nowhere (even in the paper's own literature survey) is the discussion of continental "borders". In the literature on global value chains there is evidence of regional value chains, suggesting some

diminution of national border effects within continents, but the RVCs do not apply to the Americas or Asia as a whole.<sup>1</sup>

## Conclusions

"These results call for caution when including distance and border effects in future empirical trade studies. Our results do not favour particular estimation methods, as they all have their merits and shortcomings. Rather, researchers should be aware of the impact of the selected method on the magnitude of the distance effect and on the magnitude, direction and significance of the border effect." (Section 6)

The authors should be able to go further than the saccharine assessment that all methods have merits and shortcomings. Even if they are unwilling to identify a preferred approach, based on their understanding as a result of doing this research the authors could provide an assessment of weaknesses, biases, etc. of the five estimation techniques. Their order of exposition implies a preference for least squares with dummy variable, but is this really a preference or just an expositional convenience based on most common practice?

---

<sup>1</sup> To take specific examples, although we can conceive of a Factory Asia involving Greater China, Japan, Korea and some ASEAN countries, there is no reason to expect Israel to trade more within Asia than with other continents, or that Morocco will trade more within Africa than with Europe.