

Lecture 8 (Luca De Benedictis – Macerata University and Luca Salvatici – Roma Tre University)

Gravity Models: Measurement and Trade impact of Policies

Readings

- Luca De Benedictis and Daria Taglioni, “The Gravity Model in International Trade”, in Luca De Benedictis and Luca Salvatici (2011), *The Trade Impact of European Union Preferential policies: an Analysis through gravity models*, Berlin/Heidelberg: Springer.
- Maria Cipollina and Luca Salvatici (2010), “Reciprocal trade agreements in gravity models: a meta-analysis”, *Review of International Economics*, Volume 18, Issue 1, February, Pages: 63-80

Lecture topics

Over time, gravity model has been defined as the workhorse of international trade and its ability to correctly approximate bilateral trade flows makes it one of the most successful “empirical fact” in economics. With data increasingly available for developing, as well as developed countries, the gravity model has come to be the starting point for a wide variety of research questions with a policy component.

There are two fundamental problems related to gravity-based model to evaluate the effect of trade policies: multilateral trade resistance and policy measurement. The gravity model has more recently acquired a range of micro-founded theoretical bases, showing that the typical gravity equation should account for both “bilateral resistance” and the so-called “*multilateral resistance*” term (MTR). The need to control for the multilateral trade resistance is often implemented in the literature as the inclusion of importer and exporter fixed effects. Another important issue refers to the *measurement of the trade policies* under evaluation: the recent literature emphasizes the importance of expressing trade policies through continuous variables since they vary widely across products, importers and exporters, and at least in the case of tariffs detailed data are currently available.

After an overview of the theoretical foundation of gravity models, we will then turn to the discussion of advanced issues on gravity modelling such as how to handle zero-trade flows and how to account for Multilateral Resistance.

Participants will be encouraged to use Stata to carry out estimations designed to familiarize themselves with the software and, more importantly, the gravity model. Once the basic techniques have been mastered, readers are encouraged to extend the results presented here using alternative specifications and methodologies.

Advanced readings

- Keith Head and Thierry Mayer (2015), Gravity Equations: Workhorse, Toolkit, and Cookbook, *Handbook of International Economics*, vol.4, North Holland.

Reference Book

- Luca De Benedictis and Luca Salvatici (2011), *The Trade Impact of European Union Preferential policies: an Analysis through gravity models*, Berlin/Heidelberg: Springer.