

The gravity models for trade research

ARTNeT-CDRI Capacity Building Workshop

“Gravity Modelling”

20-22 January 2015

Phnom Penh, Cambodia

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Introduction

- Gravity model is a very popular econometric model in international trade
- Origins with Tinbergen (1962). Thousands of published articles and working papers since then.
 - “Some of the clearest and most robust findings in empirical economics.” (Leamer & Levinsohn, 1995)
- The name came from its utilizing the gravitational force concept as an analogy to explain the volume of bilateral trade flows
- Initially, it was not based on theoretical model, but just intuition only
- Later on, a range of rigorous theoretical foundation has been given.

Introduction

- Gravity's main comparative advantage lies in its ability to use real data to assess the sensitivity of trade flows with respect to policy factors we are interested in.
- Numerous applications looking at different types of factors affecting trade costs, and their impacts on trade flows:
 - Transport costs.
 - Tariffs and non-tariff barriers.
 - Regional integration agreements, currency unions, and the
 - GATT/WTO.
 - Time delays at export/import and trade facilitation.
 - Governance, corruption, and contract enforcement.

Introduction

- In recent years, intuition is not enough.
- Gravity models have become a complex business: back to microfoundations!
 - Different microfoundations imply different estimation techniques.
 - Use of sectorally disaggregated data, and broad country samples, brings out new issues for theory and empirics.
- To do good applied/policy research, it is important to be on top of the latest developments in the literature.

Overview of the workshop

Day 1 : Introduction to the gravity approach

- Concepts of traditional gravity models and its problems
- Estimating traditional gravity model in STATA
- Estimating trade potential in STATA

Day 2 Theoretical Gravity models

- Estimating theoretical gravity models
 - Fixed Effect models
 - Random Effect models
 - Baier-Bergstrand approach
- Often-made mistakes

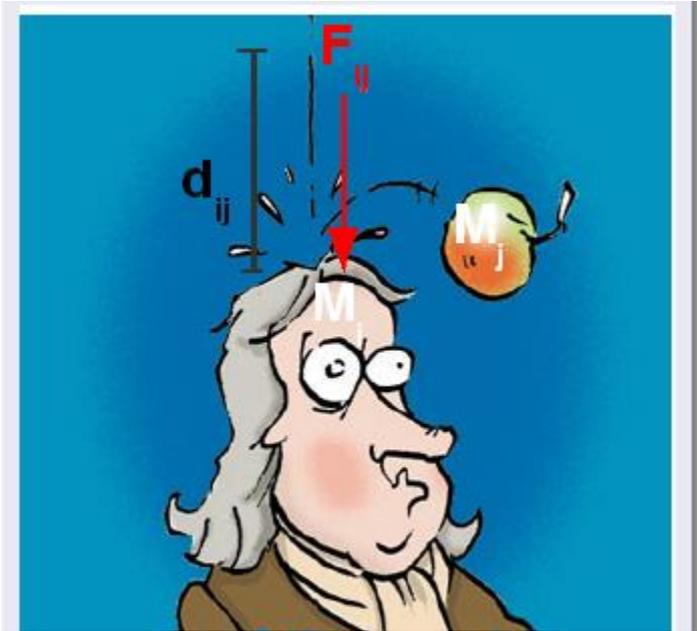
Day 3 Consolidation

- Brainstorming on group exercises
- Group presentation and comments
- Wrap-up

The traditional gravity model

- Concepts and stylized facts of the gravity approach
- Example of applications
- Identifying (“trade potentials”) using gravity approach

Gravity force in Physics



$$F_{ij} = G \frac{M_i M_j}{d_{ij}^2}$$

The gravitational force between two objects (apple, head) is directly proportional to each of their masses, and inversely proportional to the square of the distance between them.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_4590

