ARTNeT

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

ARTNeT-GIZ Capacity Building Workshop

Advance issues in Gravity Modelling

23-25 August 2016

This workshop aims to provide participants with the following:

1. A solid understanding of the gravity model of bilateral trade, including its theoretical basis;

2. Practical skills in applying basic gravity econometrics using Stata;

3. An appreciation of data and estimation issues involved in the use of gravity models in a range of applied trade policy topics.

In light of these objectives, the structure of the workshop will alternate between presentations by the trainer based on the existing literature, and "hands on" applications in which participants will be invited to explore concrete applications using real data. In addition, participants will be required to work in groups to conduct an exercise tracing through all aspects of the gravity modeling process, from research design to presentation and interpretation of results.

Workshop facilitators: Dr. Witada Anukoonwattaka, (ESCAP/ARTNeT), Dr. Selim Raihan (SANEM/ARTNeT)

Day 1: 23 August 2016

08:45 - 09:00:   Registration

09:00 - 09:15:   Opening Remarks (GIZ)

09.15 – 10.15   **Session 1** Gravity recap   (Witada Anukoonwattaka, ESCAP)

10.15-10.30   Break

10.30-12.00   **Session 2** Useful databases for gravity modeling (Witada)

- Trade flows
- Trade policies
- Trade costs and trade facilitation.
- TiVA

12.00-13.00   Lunch break

13.00-17.00   **Session 3** Counterfactual simulation using the Gravity model (Witada)
- Simulation and the AvW model
- Additional issues in counterfactual simulations
- Hands-on Empirical exercise — Counterfactual in Stata

(15 minutes break at around 15.0-15.15)

Day 2: 24 August 2016

09:00 – 12.00   **Session 4** Dealing with endogeniety   (Selim Raihan, SANEM/ARTNeT)
- Dealing with endogeneity using two stage least squares
- Empirical exercise —Dealing with endogeneity in Stata:
  - Using Stata to estimate models with instrumental variables;
  - Checking instrument validity in Stata;
  - Interpretation of results.

(15 minutes break at around 10:00-10:15)

12:00-13:00   Lunch break

13.00 – 17.00   **Session 5** Dealing with zero trade flows (Selim)
- Trade propensity, sample selection, and the Heckit estimator;
- The log of gravity, and the Poisson estimator;
- Empirical exercise —Trade propensity and zero trade flows in Stata

(15 minutes break at around 15:00-15.15)

Day 3: 25 August 2016

09.00-12.00   Session 6   Consolidation and working in group
- Working on group exercise
- Preparation of group work presentations
- Preparation of presentations on research projects

(15 minutes break at around 10:00-10:15)

12:00-13:00: Lunch break

13.00-17.00   Session 7 presentations and discussions
- Presentations of groupwork

- Presentations of research projects
- The workshop wrap up and closing

(15 minutes break at around 15:00-15.15)

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