

## ARTNeT- KRI Capacity Building Workshop on Trade Policy Analysis: Evidence-based Policy Making and Gravity Modelling for Trade Analysis 18-20 August 2015, Kuala Lumpur

This workshop aims to provide participants with the following:

1. An overview of evidence-based policy formulation and tools for policy analysis
2. A solid understanding of the gravity model of bilateral trade, including its theoretical basis;
3. Practical skills in applying basic gravity econometrics using Stata;
4. 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 facilitator: Dr. Witada Anukoonwattaka, (ESCAP/ARTNeT)

### 18 August 2015: Introduction to evidence-based policy making and the gravity techniques

08:45 - 09:00: Registration

09:00 - 09:15: Opening Remarks

09.15-12.30: Session 1 Evidence-based trade policy formulation

- Why evidence does matter for policy formulation?
- What are available statistical tools for policy analysis?
  - The difference between ex-ante and ex-post policy analysis
  - An overview of available tools:
    - Descriptive statistics and trade indicators,
    - Simulation modelling based on Partial and CGE models,
    - Econometric analysis (such as a gravity model)

(15 minutes break at around 10.45-11.00)

12:30-13:30: Lunch Break

13.30-17.00: Session 2: Introduction to using gravity models for trade analysis

- Concepts and stylized facts of the gravity approach
- Example of applications
- Major weakness of an intuitive gravity model.

(15 minutes break at around 15.00-15.15)

### **19 August 2015: Estimating the gravity models**

- 09:00 - 12:30: Session 3 – Getting start with estimating the intuitive gravity model in STATA
- The OLS estimation of an intuitive gravity model: the regression, the OLS assumptions, and the output
  - Identifying (“trade potentials”) using gravity approach
  - Major weakness of the traditional gravity model

(15 minutes break at around 10:30-10:45)

12:30 - 13:30: Lunch Break

- 13.30 - 17.00: Session 4 - The theoretical gravity approach
- Concepts of the theoretical gravity model
  - The Anderson and Van Wincoop (AvW 2003) model
  - Empirical implication
  - The fixed effect (FE) estimation in STATA for the theoretical gravity model

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

### **20 August 2015 : Using gravity techniques in policy analysis**

- 09:00 - 12.30: Session 5 - Augmented the theoretical gravity model
- The augmented FE gravity model and the concerns
  - The Random Effects (RE) approach
  - The Baier and Bergstrand (BB) approach
  - Recent development in gravity modelling

(15 minutes break at around 10:30-10:45)

12:30 - 13:30: Lunch Break

- 13.30- 17.30: Session 6 – Consolidation
- Work on group exercises
  - Group presentation and discussions

17.30-18.00 Certificates and closing

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

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