Global CGE Course Project

1

Outline

- Objectives
  - Use ANARRES_t model for policy analysis
- Tasks
  - Develop proposal – 'terms of reference'
  - Project data
  - Run the model with new aggregation
  - Simulations
  - Closures
  - Sensitivity analysis
- Interpret your results
- Final report

2

Objective

- Use ANARRES_t model for policy analysis

  – Aggregate the model data base
  – Run `anar_t.gms` with your project database
  – Formulate and code policy experiments
  – Interpret Results
  – Write a report

3

Tasks

- What is the policy question and why is it interesting?
  – Provide the 'backstory'
- Proposed aggregation
- Experiments and model
  - Summarise experiments
  - Macro economic closures
  - Market clearing conditions
- Bigger is not necessarily better
  – Avoid Intermediate/computing problems
  – Saves time

4

Tasks

- Project Data
  - Aggregate global database (maximum)
    - 15 commodities/activities
    - 5 factors
    - 9 regions (excl. Globe)
  - Read 'your' database into `anar_t.gms`
    - Setup Excel workbook
    - Assign sets, parameters and elasticities
  - SAM structure in the global database
    - Same tax accounts as for previous exercises
- Run the model
  - Test model with 'your' database
  - Describe the structure of the economy

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5

Tasks

- Develop the simulation using a LOOP
  - Assign model closure, consider different closures
  - Assign factor market clearing condition

- Sensitivity Analysis

- Interpret Results

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6

Interpret Results

- Where does the policy shock affect the price structure?
  - Review the price tree diagrams
- What results do you **expect** to find?
  - Before you look at the numbers!!!
- What are the direct effects in the market you have shocked?
- What are the indirect effects on other markets?
- What are the general equilibrium effects?
- How does the structure of the economy help to explain the results?

7

Final Report

- Briefly describe the economies and trade linkages among them
- Briefly describe the policy question
- Describe
  - Simulation
  - Macro closure
  - Market clearing assumptions
  - Sensitivity analysis
- What are the key findings?
  - Audience = policy makers
    - Intuitive explanations relating to your results
- 15 page max
  - Including tables, figures and graphs

8

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Document Your Work

- ALL *.gms, *.inc and data files used
  - Include your initials in the file name
  - Indicate changes in code
- Excel workbook to read in 'your' global database
- Excel workbook with experiment data
- Close GAMS and run `clean.bat` file
- **Can you replicate your results?**

9

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The End

10