

***SinoTERM – CHINA MULTI-REGIONAL CGE MODELLING
COURSE, BEIJING 22 - 26 JULY 2024***

***Conducted by
Centre of Policy Studies (CoPS), Victoria University
And hosted by
Center of Economic Policy and Trade Analysis (CEPTA) and Digital
Economy Laboratory, University of International Business and
Economics (UIBE)***

For inquires, contact: Xiujian Peng (xiujian.peng@vu.edu.au)
Jun Yang (yjdy.ccap@igsrr.ac.cn)

Summary

The Centre of Policy Studies(CoPS) at Victoria University, Melbourne, Australia will offer an intensive five-day course introducing participants to multiregional computable general equilibrium modelling and to the GEMPACK software used to solve equilibrium models. The course will be hosted by the Center of Economic Policy and Trade Analysis (CEPTA) and the Digital Economy Laboratory, University of International Business and Economics (UIBE) during 22-26 July 2024. The course will be lectured in both English and Chinese with tutoring available in both English and Chinese during computer sessions.

The course focuses on a multi-regional applied general equilibrium model of China: the SinoTERM model with 2006 input-output database. The model is a variant of the TERM model (<http://www.copsmodels.com/term.htm>).

TERM (The Enormous Regional Model) is a multiregional CGE model of a single country, which is "bottom-up" -- it treats each region as a separate economy. Two key features of TERM are: (a) its ability to solve quickly with a large number of regions or sectors, and (b) its database construction methodology, which allows a multiregional database to be constructed quickly, even with quite limited regional data.

The first, Australian, version of TERM distinguished 144 sectors and 57 regions. More recently, its master database has been extended to represent 182 sectors in 205 statistical sub-divisions (SSDs), so that urban areas, water catchment areas and tourism regions may all be distinguished accurately. The high degree of regional detail makes TERM a useful tool for examining the regional impacts of shocks (especially supply-side shocks) that may be region-specific. Finally, TERM has a particularly detailed treatment of transport costs and is naturally suited to simulating the effects of improving particular road or rail links.

The TERM model of the Australian economy has been used extensively for policy analysis in Australia for more than two decades. TERM has been used as the basis of many multi-regional models of other countries including Brazil, China, Finland, Indonesia, Italy, Japan, Korea, New Zealand, Poland, South Africa, Sri Lanka, Sweden and USA. GEMPACK software is used by research workers in over 900 different locations in about 70 countries around the world.

The SinoTERM model is a multi-regional model of China. Its original version includes 31 regions and 145 sectors. Please visit <https://www.copsmodels.com/sinoterm.htm> for details of SinoTERM model. The 2012 version includes 365 regions and 165 sectors. The latest version with 2017 database includes 31 regions and 159 sectors.

For 2024 Beijing course, the course material is based on the SinoTERM model. Its database is an aggregated **2006** database.

Course Program

The course runs from Monday to Friday 9am to 5.30pm. During the first 4 days, about equal time is spent on lectures explaining CGE theory as applied to SinoTERM, and on lab sessions designed to teach how to compute and explain simulation results. Then, participants form into groups, each focused on running and analysing different simulations. On Friday afternoon the groups present and explain their simulation results. Participants in this course will need to bring their own notebook computer (for notebook requirements, see <http://www.copsmodels.com/laptops.htm>). The course is designed as an intensive live-in program, with fairly long work hours.

Rationale for the SinoTERM Course

The course should appeal to

- those needing background in order to work with, or understand results from, a typical CGE model like SinoTERM;
- those wishing to use the theory of SinoTERM with GEMPACK as the basis for a model of a country other than China;
- those wishing to get sufficient background in order to learn about single country, multi-country, dynamic and/or forecasting models. Examples of such models are the Monash-Multi-Country model, CHINAGEM model of China, MONASH or MMRF models of Australia or the USAGE model of USA. This course also provides the background assumed for more advanced multi-regional or dynamic model courses run by CoPS each year.

Course Outline

The course aims to introduce participants to the ideas and techniques of CGE modelling, and to equip them to start using, adapting or constructing CGE models for their own simulations. By the end of the course, participants will have acquired thorough knowledge of:

- the theory underlying CGE models;
 - the basic structure of a typical multi-regional CGE model;
 - the representation of applied GE models in the notation used in GEMPACK;
 - the data requirements of a typical multi-regional CGE model;
 - checking that the equations and data of a model are implemented correctly on the computer;
 - formulating exogenous scenarios;
 - computing simulations for policy analysis;
 - interpreting and reporting results.
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Documentation and Software

Course participants receive a folder, containing

- course notes and printed lecture slide shows;
- exercises to be completed in classes and labs;
- documentation of the SinoTERM model and data;
- instructions for installing and using GEMPACK.

At the end of the course participants receive one or more folders, containing

- an Executable-Image version of the latest GEMPACK software which will allow them to run SinoTERM simulations on any modern Windows PC, and to construct and run their own models of comparable size;
- PDF files containing the complete GEMPACK documentation;
- a GEMPACK licence for the above software, expiring after one year;
- all computer files needed to run the SinoTERM model used in the course;
- an image of the entire CoPS website, containing many example models, working papers, and utility programs.

Assumed Background for the SinoTERM course

Previous hands-on experience in solving GE models is not required. We expect that course participants have:

- a bachelor or master degree in Economics, or equivalent work experience;
- experience of using a PC or notebook running Windows;
- a desire to learn about CGE modelling.
- Completed basic CGE modelling course such as Practical GE course offered by CoPS.

Nevertheless this course is more technically demanding than the Practical GE Modelling course, and we expect that many participants will have previous exposure to CGE modelling. To avoid boring those who have already learnt the basics, we have chosen to present a slightly different set of techniques from those used in the Practical GE course.

Preparing for the course

If you have not worked with GEMPACK before, you should download and work through the MINIMAL course material. Although far simpler, the MINIMAL model and course use similar notation and software to TERM. To go further, you should:

- download and read the ORANI-G document, which you can find at the top of [this page](#);
- download and experiment with the free [Demonstration Version of GEMPACK](#).
- study the [TERM webpage](#), and the material that it links to.

Course Fee

SinoTERM CGE modelling course fee is **AU2600.00** per person.

The fee covers course materials (including software), morning and afternoon teas, lunches and one dinner. It does not cover accommodation, breakfast or other dinners.

Registration and Payment

Complete and return [this registration form](#), which contains payment details and return email addresses. Registration and Payment must be completed by 10 July 2024.

Venue and Accommodation

Course Venue

University of International Business and Economics (UIBE)

No.10, Huixin Eastern Street, Chaoyang District, Beijing, 100029

Accommodation

Participants are required to arrange their own accommodation. For information regarding accommodation near the course venue contact:

Yingyue Zhang

Tel: +010-64495210

Email: 10099@uibe.edu.cn

SinoTERM-China Multi-regional CGE Modelling Course
Beijing, China 22– 26 July 2024

Conducted by
Centre of Policy Studies, Victoria
University

COURSE REGISTRATION

Attention: Xiujian Peng
(Xiujian.Peng@vu.edu.au) Please copy email to:
Louise Pinchen (Louise.Pinchen@vu.edu.au)
and Jun Yang (yjydy.ccap@igsnr.ac.cn)

Centre of Policy Studies, Victoria University, Melbourne.
Postal address: PO Box 14428 Melbourne, Victoria 8001,
Australia

Fax: (from overseas) +61 3 9919 1108 (within Australia) 03 9919 1108

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NAME: _____

ORGANISATION: _____

ADDRESS: _____

PHONE AND FAX: _____

EMAIL: _____

Course fee _____

- Pay via credit card – AUD only
- Pay via electronic funds transfer to VU's Australia bank at Melbourne (AUD)
- Pay via electronic funds transfer to UIBE at Beijing (RMB)
- Pay by cash (AUD only)