

TRAINING WORKSHOP ON

Computable General Equilibrium Models and Policy Analysis

October, 2021
Online Training

I- Introduction

The aim of the workshop is to provide participants with the basic tools for constructing and implementing a general equilibrium model for policy analysis. This will enable them to answer relevant research questions at both the academic and policy levels.

By the end of the training participants will have acquired detailed knowledge and hands-on experience in CGE models, in particular:

- The structure of open economy general equilibrium models,
- Calibrating a CGE model
- Implementing the model using the GAMS software
- Modeling trade, fiscal and environmental policies
- Formulating scenarios and running policy simulations
- Reporting and interpreting the results

The workshop emphasizes theory and applications. GAMS software is used for applying the quantitative methods and running simulations studied on empirical economic problems through computer exercises.

The workshop will be conducted mainly in English, with the possibility of using Arabic and French if needed. The workshop will be held over Zoom. The training will be conducted by Prof. Chahir Zaki. A short biography is included at the end of this announcement.

II- Eligibility:

Applicants should be:

- Researchers from the ERF region with MAs or PhDs or in the process of completing these degrees.
- Less than 40 years of age.

- Trained in statistics, economics and mathematics and able to use statistical programs.
- Familiar with the management and analysis of macroeconomic datasets.
- Priority will be given to those who have not attended previous ERF workshops.

III- Application procedure:

Applications must include a curriculum vitae (CV) with a minimum of one reference name and a motivation letter indicating why the candidate is interested in the topic of the workshop and how it relates to his/her research.

Deadline for submissions: October 4th, 2021.

Send your submission through this link

<https://erf.org.eg/online-training-workshop-submission-form-3/>

IV- Program:

Day 1 (October 18)

16:00-16:30	Introduction and Objectives of the Workshop
16:30-17:30	Introduction to CGE models
17:30-17:45	Coffee Break
17:45-19:00	Microeconomic and Macroeconomic Refreshments

Day 2 (October 20)

16:00-17:30	Introduction to GAMS
17:30-17:45	Coffee Break
17:45-19:00	Writing a simple closed economy CGE model GAMS Hands-On Training and Running Simulations

Day 3 (October 25)

16:00-17:30	Writing a simple closed economy CGE model with two sectors GAMS Hands-On Training and Running Simulations
17:30-17:45	Coffee Break
17:45-19:00	GAMS Hands-On Training and Running Simulations

Day 4 (October 27)

16:00-17:30	Writing an open economy CGE model with Government GAMS Hands-On Training and Running Simulations
17:30-17:45	Coffee Break
17:45-19:00	Introduction to Dynamic Models

V- Readings

A- Textbooks

- Burfisher, M. (2011) *“Introduction to Computable General Equilibrium Models”* Cambridge University Press.
- Dixon, Peter B., and Dale Jorgenson, eds. Handbook of computable general equilibrium modeling. Newnes, 2012.
- Savard, L., Decaluwé, B. and Martens, A. (2003) *La politique économique du développement et les modèles d'équilibre général calculable*, Les presses de l'université de Montréal.

B- Papers

- Annabi, N., Cockburn, J., and Decaluwé, B. (2004) A Sequential Dynamic CGE Model For Poverty Analysis, May, *mimeo*.
- Decaluwé, B., Lemelin, A., Maisonnave, H., and Robichaud, V. (2010) "The PEP Standard Computable General Equilibrium Model: Single Country Recursive Dynamic Version PEP1-t", Poverty and Economic Policy Research Network, *mimeo*, January.
- Decaluwé, B., Lemelin, A., Maisonnave, H., and Robichaud, V. (2009) The PEP Standard Computable General Equilibrium Model: Single Country Static Version PEP1-1, Poverty and Economic Policy Research Network, *mimeo*, October.
- Konan, D. and Maskus, K. (1996) A Computable General Equilibrium Analysis of Egyptian Trade Liberalization Scenarios, *World Bank Working Paper* No. 97-1, August.
- Konan, D. and Maskus, K. (1997) Trade Liberalization in Egypt, *Review of Development Economics* 1 (3), 275-293.
- Marouani, Mohamed Ali. "Ouverture commerciale et emploi: un modèle d'équilibre général avec salaires d'efficience appliqué à la Tunisie." *Revue économique* (2000): 557-569.
- Marouani, M. A. (2002). Imperfections du marché du travail et modèles d'équilibre général calculables: une revue de littérature. Document de Travail DIAL DT/2002/16.
- Zaki, C. (2014) "An Empirical Assessment of the Trade Facilitation Impact: New Econometric Evidence and Global Economic Effects", *World Trade Review*, volume 13, issue 01, pages 103-130.
- Zaki, C. (2013) "Trade Facilitation and Corruption: A CGE Model of Egypt", *Journal of North African Studies*, vol. 18 no.1, pages 70-111.
- Additional reading list will be given through the course.

C- Training Materials on CGE, GAMS and SAM::

- Partnership for Economic Policy (PEP). Training materials in development policy modeling (MPIA). Retrieved from <https://www.pep-net.org/training-material-1>
- GAMS Development Corporation. GAMS Documentation. GAMS Development Corporation: Washington, D.C, Retrieved from <https://www.gams.com/25.1/docs/>
- McCarl, B., Meeraus, A., Eijk, P. van der, Bussieck, M., Dirkse, S., & Pete, S. *McCarl GAMS User Guide*. GAMS Development Corporation: Washington, D.C, Retrieved from <https://www.kth.se/social/upload/53230bbcf27654558a68f3df/GAMS-McCarl-userguide%5B1%5D.pdf>
- Rosenthal, R. (2007). *GAMS — A User's Guide*. GAMS Development Corporation: Washington, D.C. Retrieved from <http://dl.icdst.org/pdfs/files3/8400af40bb7e29457587d98847678980.pdf>
- Löfgren, H. (2003a). *Exercises in general equilibrium modeling using GAMS*. International Food Policy Research Institute (IFPRI): Washington, D.C. Retrieved from <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/62105>

- Löfgren, H. (2003b). *Key to exercises in CGE modeling using GAMS*. International Food Policy Research Institute (IFPRI): Washington, D.C. Retrieved from <http://ebrary.ifpri.org/cdm/singleitem/collection/p15738coll2/id/125402/rec/2>
- Breisinger, C., M. Thomas, and J. Thurlow. (2009). *Social accounting matrices and multiplier analysis: An introduction with exercises*. Food Security in Practice technical guide 5. International Food Policy Research Institute: Washington, D.C. Retrieved from <http://www.ifpri.org/publication/social-accounting-matrices-and-multiplier-analysis>

Biography:

Chahir Zaki is a citizen of Egypt. At present, Chahir is an Associate Professor of Economics at the Faculty of Economics and Political Science, Cairo University. In this position, Chahir teaches and conducts research on trade policy and macroeconomics. He is also the Director of the French section at the faculty. Chahir works also for the Economic Research Forum (Cairo, Egypt) as a part-time senior economist and as a consultant for several international organization (the World Bank and the International Trade Center (UNCTAD-WTO, Geneva) and ESCWA). He holds a B.A. in Economics from the Faculty of Economics and Political Science, Cairo University, an M.A. in Economics from Université Paris 1 Panthéon Sorbonne, and a Ph.D. in Economics from Université Paris 1 Panthéon Sorbonne. His research interests include international trade, trade policy, trade in services, applied economics and macroeconomic modeling. He has published numerous studies in the *International Trade Journal*, *the World Trade Review*, *Economic Modeling* and *Applied Economics*.