MAJIG
Macroeconomics for Justice and Inclusive Growth

Co-funded by the Erasmus+ Programme of the European Union

Macroeconomics for Justice and Inclusive Growth

MAJIG

Deliverable 1.1

4 training courses' programmes

Project Coordinator: Professor Marco Missaglia, University of Pavia

Lead Beneficiary: Universidad de Cartagena

INTRODUCTION

The present work defines the structures of the training programmes foreseen in the WP2 “Training of Trainers: Laying the Basis for establishing the Research Units”.

It is the result of a research carried out in the preliminary phase of the project, prior to its application stage, during which a questionnaire has been submitted to the project relevant stakeholders in order to investigate the local needs and the state of art in the distribution of macroeconomic teaching, macroeconomic modelling for policy forecast, etc.

The Cartagena Kick-off Meeting has been crucial in this regard, since it has allowed to combine each partner’s needs and capabilities in terms of teaching and research with the local needs that MAJIG intends to meet.

The following four specific syllabi, therefore, represent our best attempt to provide a well-constructed and sound Training of Trainers.

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COURSE 1

Behind SFC models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics

Marco Missaglia – University of Pavia

This course consists of the first module of MAJIG. It is expected to be delivered both in La Paz, Bolivia and Bogota, Colombia. The course will totalize 30 hours and will alternate between two types of activities: lectures, and workshop sessions. In the lectures the main theoretical notions and theoretical debates that lie in the back of SFC models are presented and discussed. Workshop sessions are practical, open-ended activities aimed at applying the above-mentioned notions and models to some specific Latin American macroeconomic issues and are based on participants' motivations.

Learning goals

- Understand the basic of structuralist and post-Keynesian macroeconomics and their key differences with mainstream, neoclasically-oriented macroeconomic approaches
- Understand why structuralist and post-Keynesian macroeconomics are key to a deep understanding of several macroeconomic challenges faced by Latin American countries, with a special focus on Bolivia and Colombia
- Build the basis for a solid understanding of MAJIG's following three courses

Skills

It is expected that by the end of this course participants are able to:

- Critically analyse and actively participate to the macroeconomic debate in Latin America, with a special focus on Bolivia and Colombia
- Critically evaluate the different theoretical approaches that might lie in the back of any specific SFC model.

Contents

Module 1: The Basics

In this module, participants will go through several specific macroeconomic topics. Some of them (especially 5, 6 and 7 in the list below) are especially relevant for Latin American countries.

1. Nature and role of money (Marx, Schumpeter, Keynes)
2. Say' law vs. Principle of Effective Demand in a monetary economy of production
3. What do firms decide? Theory of prices and theory of investments
4. Fix-price vs. flex-price sectors (Hicks, Kalecki and Leontief). Supply constraints in a demand-led economy.
5. Different structures. On the dangers and limitations of using aggregate models.

6. Inflation, causes and consequences (Bob Rowthorn vs. William Phillips)
7. The coexistence of simple commodity production ("mixed incomes" in national accounts) and capitalist production: theoretical and modelling issues (Marx, Lewis and contemporary Latin American thought)
8. The economy Is always demand-driven. "Short-run", "medium-run" and "long-run": a deep, critical discussion of mainstream neo-Keynesian macroeconomics (the "3-equation model") and the relation between logical and chronological time.

Module 2: Simple Models

The purpose of this module is, on the one-hand, to familiarize participants with the modalities of putting together the different elements discussed in Module 1 to build a complete macro model; on the other hand, to give them a sense of the larger, dynamic SFC models they will learn in the three subsequent MAJIG courses

1. A static, structuralist, one-sector model of a closed economy
2. A static, structuralist, one-sector model of an open economy

Digression on "closures". Closure as a theoretical choice and closure as a pragmatic, institutional judgement (example: what happens when nominal exchange rate adjustments are not an option?)

3. A static, structuralist, multi-sectoral model of a closed economy
4. A static, structuralist, multi-sectoral model of an open economy
5. Dynamics

References

Blecker, R.A. and M. Setterfield (2019), Heterodox macroeconomics: models of demand, distribution and growth, Edward Elgar Publishing.

Duque Garcia, C.A. (2022), Economia Colombiana, Una Introducciçn Critica, Skepsi, Bogota

Jaramillo, S. (2016), Heterogeneidad estructural en el capitalismo. Una mirada desde la Teoría del Valor Trabajo Abstracto. *Territorios*, 34, 59-85.

Taylor, L. (1983), Structuralist Macroeconomics, Basic Books, New York

Taylor, L. (1990), Socially Relevant Policy Analysis. Computable General Equilibrium Models for the Developing World, MIT Press

Lecture notes of the teacher

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COURSE 2

Theoretical SFC models and data requirement

Michalis Nikiforos – University of Geneva and University of Pavia

This course consists of the second module of MAJIG. It is expected to be delivered both in La Paz, Bolivia and Bogota, Colombia. The course will totalize 30 hours and will alternate between three types of activities: lectures, exercise and workshop sessions. In the lectures, following a step-by-step approach, different theoretical SFC models (from the "smallest" to the "largest") will be built together with the participants, using the software Eviews and becoming familiar with the computer solution of these models.. On top of this, the specific data requirement for each model will be presented and discussed. In the exercise, computer-based sessions, participants will have to modify the previously built models, introduce different assumptions, elaborate on specific, concrete macroeconomic issues using those models, etc. Workshop sessions are practical as well, but based on participants' motivations and proposals

Learning goals

- Understand the link between the theoretical issues discussed in the first MAJIG course (see above) and the SFC models built in this second MAJIG course
- Understand the data requirement needed to build any specific SFC model
- Understand how to interpret and use an already existing SFC model
- Understand how to build an own SFC model to address specific policy issues
- Understand how to replicate the benchmark and simulate a SFC model using the software Eviews.

Skills

It is expected that by the end of this course participants are able to:

- Build a theoretical SFC model using the software Eviews.
- Replicate the benchmark and simulate SFC models using Eviews
- Develop, using Eviews, a theoretical SFC model incorporating the key features of the Bolivian and Colombian economies

Contents

Module 1: closed economy

In this module, participants will learn the fundamental principle of SFC modelling by concentrating on the simplest case, i.e., the somehow fictitious framework of a closed economy

1. General Principle of Stock-Flow-Consistent modelling
2. Balance Sheets, Transaction Matrices and the Monetary Circuit in a closed economy
3. Money endogeneity and Tobin's approach to portfolio management
4. A closed economy SFC model with bank money and government money

5. Capital accumulation (investments) and growth in a SFC model
6. Price-setting and inflation in a closed economy SFC model
7. The interaction between fiscal and monetary policies in a closed economy SFC model
8. Different “closures” for a SFC model

Module 2: open economy

In this module, participants will learn how to build, modify and simulate an open economy SFC model. This is a much more realistic setting, and then special attention will be devoted to some key macroeconomic issues in several Latin America countries

9. Balance Sheets, Transaction Matrices and the Monetary Circuit in an open economy. More on the data requirements for a SFC model
10. Flexible vs. fixed exchange rates. More on the different closures of a SFC model
11. Key issues in Latin America: studying the evolution of public and external debt in a SFC model. Adjustment, “austerity” plans, and other hot issues.
12. Key issues in Latin America: studying income and wealth distribution in a SFC model
13. Key issues in Latin America: simulating the impact of commodity-prices’ variations in an open economy SFC model

References

Godley, W. and M. Lavoie (2007), *Monetary Economics. An Integrated Approach to Credit, Money, Income, Production and Wealth*, Palgrave Macmillan

Nikiforos, M. and Zezza, G. (2017) 'Stock-Flow-Consistent Macroeconomic Models: A Survey', *Journal of Economic Surveys*, 31(5), 1204-39.

Papadimitriou, D.B., Nikiforos, M., and Zezza, G. (2013) The Greek Economic Crisis and the Experience of Austerity: A Strategic Analysis, Annandale on Hudson: Levy Economics Institute, *Strategic Analysis*, July.

Lecture notes of the teacher

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COURSE 3

Applied SFC Modelling

Gennaro Zezza – University of Cassino and Levy Economics Institute

This course consists of the third module of MAJIG. It is expected to be delivered both in La Paz, Bolivia and Bogota, Colombia. The course will totalize 30 hours and will alternate between three types of activities: lectures, exercise and workshop sessions. In the lectures, following a step-by-step approach, different SFC models (from the "smallest" to the "largest") will be built *and estimated econometrically* using the software Eviews. In this respect, it will be key to have a good grasping of what was learnt during the second MAJIG course. In the exercise and workshop sessions, participants will start building and estimate econometrically a SFC model for their own countries, Bolivia and Colombia.

Learning goals

- Understand the link between the data requirement discussed in the second MAJIG course (see above) and the applied SFC models built in this third MAJIG course
- Understand how to use time-series econometrics to estimate (and then male "applied") SFC models
- Understand how to simulate an estimated SFC model

Skills

It is expected that by the end of this course participants are able to:

- Go through all the key steps to build an applied SFC model for a whole country starting from the available time-series data
- Make in-sample simulations and projections using Eviews with their own SFC models

Contents

Module 1: Organization of the data and parameter estimation

1. Exogenous and endogenous variables. Recursive vs simultaneous systems of equations
2. Steady-state vs steady-growth models
3. National Accounts: SFC requirements vs actual data
4. From data analysis to model structure
5. Organizing the data in Eviews
6. Checking model consistency
7. Parameter estimation
8. In-sample model simulation
9. Projections

Module 2: toward the building of a SFC model for Bolivia and Colombia

10. Available time series for Bolivia and Colombia
11. Some structural features of the Bolivian and Colombian economy
12. Building the database
13. Some key equations

References

Nikiforos, M. and Zezza, G. (2017) 'Stock-Flow-Consistent Macroeconomic Models: A Survey', *Journal of Economic Surveys*, 31(5), 1204-39.

Papadimitriou, D.B., Nikiforos, M., and Zezza, G. (2013) The Greek Economic Crisis and the Experience of Austerity: A Strategic Analysis, Annandale on Hudson: Levy Economics Institute, *Strategic Analysis*, July.

Zezza, G. (2009) 'Fiscal policy and the economics of financial balances', *European Journal of Economics and Economic Policies: Intervention* 6(2), 289–310.

Zezza, G. (2012) 'Godley and Graziani: Stock-Flow Consistent Monetary Circuits', in Papadimitriou, D.B., Zezza, G. (eds.), *Contributions in Stock-Flow Consistent Modeling: Essays in Honor of Wynne Godley*, Palgrave MacMillan.

Zezza, G., and Zezza, F. (2019) 'On the design of empirical stock-flow-consistent models', *European Journal of Economics and Economic Policies: Intervention*, issue 1/2019

Lecture Notes of the teacher

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COURSE 4

Stock-Flow Consistent Input-Output Models for the Analysis of the Low-carbon Transition

Sebastian Valdecantos – University of Aalborg

This course consists of the last module of MAJIG. It is expected to be delivered in May 2024 in La Paz, Bolivia. The course will totalize 30 hours and will alternate between three types of activities: lectures, exercises and workshop sessions. In the lectures the main concepts and sample models are presented. Exercises present close-ended instructions aimed at fixing a specific concept. Workshop sessions are also practical activities as exercises but are more open-ended and based on participants' motivations.

Learning goals

- Understand how the contents of MAJIG's previous three modules can be combined to create a realistic representation of the economy.
- Familiarize with data sources describing the production process and its links to the environment.
- Build theoretical and empirical models capable of addressing relevant policy questions.

Skills

It is expected that by the end of this module participants are able to:

- Critically analyse macroeconomic work based on input-output analysis and/or environmental accounts.
- Create their own models, or modify the ones developed in the course, to address various macroeconomic questions.

Contents

Module 1: Foundations of Input-Output Analysis

In this first module participants will learn the foundations of input-output analysis and how these can be used to build a structural representation of an economy's production structure. The module starts with a simple conceptual presentation of input-output tables through which participants can quickly acquire the core concepts. In the next step real-world examples of input-output tables are presented. These tables are used to conduct a series of analyses to fix the concepts and familiarise them with the challenges of working with real-world data. Additionally, participants will familiarise themselves with the economic structure of Bolivia and Colombia as described by the data.

Contents:

- The structure of input-output tables and their relationship with the economy's production structure.
- Multipliers (output, employment).
- Empirical input-output analysis: application to the cases of Bolivia and Colombia.

Bibliography:

- Miller and Blair (2009). Input-Output Analysis: Foundations and Extensions. Chapter 2.
- Lecture notes of the teacher

Module 2: Combining Input-Output with SFC Models

Building on the contents of the first three modules of MAJIG, this second block integrates SFC models with input-output analysis to build models that provide a realistic representation of the most important features of Latin American economies. Emphasis will be made on how different productive structures and specialization patterns can be represented through SFC-IO models. After developing a theoretical representation of a SFC-IO model, the empirical input-output tables used in Module 1 are combined with National Accounts data to create an empirically-grounded SFC-IO model for Bolivia and Colombia. Finally, these empirical models are used to address research questions related to the macroeconomic challenges these economies face.

Contents:

- Prebisch meeting Godley: introducing Latin American Structuralism in the framework of SFC models through input-output tables. A theoretical analysis.
- Building an empirically grounded SFC-IO model: application to the cases of Bolivia and Colombia.
- Using SFC-IO models for economic policy simulation and prospective analysis: application to the cases of Bolivia and Colombia.

Bibliography:

- Lecture notes of the teacher

Module 3: Integrating environmental accounts into SFC-IO Models

This module aims to show how environmental and economic data can be coupled to create integrated assessment models (IAM). Unlike conventional IAM in the tradition of Nordhaus, this course presents IAM built upon the foundations of the Post Keynesian and Latin American Structuralist schools. After presenting conceptually how to integrate the two types of data, the module uses the empirical SFC-IO models developed in Module 2 to integrate environmental accounts, leading to an Environmental Stock-Flow Consistent Input-Output Model (ESFCIO). The country models for Bolivia and Colombia are then used to address questions related to the macroeconomic challenges entailed in the low-carbon transition.

Contents:

- Integrating environmental accounts (resources (energy) and outputs (greenhouse gases)) into the input-output tables.
- Integrating environmental accounts into the structure of a SFC-IO model: application to the cases of Bolivia and Colombia.
- Using environmental SFC-IO models for economic policy simulation and prospective analysis in the context of the low-carbon transition: application to the cases of Bolivia and Colombia.

Bibliography:

- Miller and Blair (2009). Input-Output Analysis: Foundations and Extensions. Chapter 7.
- Lecture notes of the teacher