

Macroeconomics for Justice and Inclusive Growth

MAJIG

Deliverable 2.1

Report on the training activities

Project Coordinator: Professor Marco Missaglia, University of Pavia

Lead Beneficiary: Aalborg Universitet

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1. Introduction

Overview of Work Package 2

MAJIG Work Package 2 (WP2), named *Training of trainers: Laying the basis for establishing the research units*, is focused on the realization of a structured set of training activities aimed to enhance the research and teaching capabilities of the Latin American partner Higher Education Institutions (HEIs) in the field of development macroeconomics.

The MAJIG training programmes were designed to provide the involved researcher and teachers belonging to the Latin American partner HEIs with the technical skills needed to build the Stock-Flow Consistent (SFC) “maquette” models together with the organizational capabilities required to set up the Research Units. These Units will oversee the elaboration and use of the SFC models for policy analysis and forecasting.

The MAJIG WP2 is composed of four specific tasks, named:

- T2.1 - *Purchase of the equipment*

The task involves the procurement of software licenses essential for macroeconomic modelling, specifically the *Academic E-Views 12 single user unlimited license*. The E-Views licenses are strictly for academic use, meaning they are intended for teaching and research purposes within HEIs. The E-views software will be used for research purposes by the teachers and researchers belonging to the MAJIG Latin American partner HEIs. Additionally, provision is made for the R software, which is freely accessible and serves as a robust alternative to E-views.

- T2.2 - *Delivery of training program*

The task includes the implementation of a structured set of training activities targeting researchers and professors belonging to the Latin American partner HEIs. They are organised around the four fundamental pillars needed to build a SFC macroeconomic model, namely: a) National and Financial Accounts; b) Statistics and Macroeconometrics; c) Advanced Keynesian Macroeconomics; d) Step-by-step building of a SFC macroeconomic model.

- T2.3 - *Training courses’ virtual “packages”*

The task focuses on the creation of virtual training packages. These packages will consist of recorded sessions from the in-person training courses, making the content accessible to a broader audience beyond the initial participants. The virtual classes will serve as useful resources for those who could not attend the training in person or for future reference and self-study.

- T2.4 - *Report on the training activities*

The task involves the preparation of a detailed report on the training activities to provide an overview of the training process, achievements and outcomes.

Purpose of the document

The present report is the outcome of T2.4 task and it serves as a detailed record of the training activities conducted under Work Package 2.

It was drafted by Aalborg Universitet (AAU), together with the Project Coordinating Institution, the University of Pavia (UNIPV), and the Latin American hosting institutions: Universidad Nacional de Colombia (UNAL) and Universidad de La Salle (ULSA) in Colombia and Universidad Mayor de San Andrés (UMSA) in Bolivia.

The report content was enriched through consultations with the European trainers from the consortium, who shared their insights on the implementation of the training activities, as well as on the participation and responsiveness of the participating researchers and teachers. Following this input, the entire consortium conducted a review of the draft to ensure that all the relevant information was included.

The report provides a detailed explanation of the rationale behind the structure of the training programmes and it outlines the specific content of each module. It also describes the implementation methods, the participants' engagement and the recognition of learning achievements. Additionally, it summarizes the results of the evaluation questionnaires completed by the involved teachers and researchers after each training module, offering insights into the effectiveness and impact of the training activities.

2. Training of trainers: introduction to the 4 training programmes

The structure of the training programmes is the result of a research carried out in the preliminary phase of the Project, prior to its application stage. The preliminary need-analysis was realised via a series of questionnaires addressed to the Latin American partners' students, professors and staff. The questionnaire showed a general recognition of the important role played by research centres able to build and use macroeconomic models for policy purposes. The students expressed high interest in gaining experience in such centres, highlighting the benefits for their careers and the potential for interdisciplinary collaboration. They also considered the involvement in international projects such as MAJIG as extremely valuable, emphasising the need for increased expertise, international cooperation, along with innovative teaching and research structures.

In light of the needs identified through the above mentioned questionnaires, the consortium proposed to realise four sequential and interrelated courses on macroeconomic modelling. Their common features are the following:

1. emphasis on SFC models, since this specific typology of models was identified by the totality of respondents as the most suitable to develop both research and training capabilities in the field of macro analysis, as well as to strengthen their connections with policy-makers;
2. emphasis on hands-on and “practical” capabilities and applications. The four proposed courses, indeed, devoted a very significant portion of time to model-building using computer exercises, data analysis, etc. and in any case participants were actively involved in the construction of the class;
3. emphasis on some specific issues that respondents identified as key to their research and teaching plans, i.e. environmental macro models and multisectoral models;
4. emphasis on sustainability over time of the project. This means that most participants were identified among young researchers belonging to the Latin American partner universities. This will favour both the long-term horizon of the proposed research units as well as the enrichment of their teaching curricula.

The training programmes were drafted to benefit not only Latin American researchers at the beginning of their careers, but also more expert researchers and teachers willing to strengthen their knowledge in the field of macroeconomic modelling for progressive and inclusive growth.

The content of the training programmes is outlined in the “*Four Training Courses’ Programs*” (Deliverable D1.1). Below is a brief overview of the four training modules, including their main objectives and key content.

Module 1 and Module 2 are essentially devoted to developing the methodological and analytical skills beneath the SFC models, whereas Module 3 and Module 4 concentrate on applications and practical policy analysis. This structure allowed participants to progressively develop, on a step-by-step basis, the full range of capabilities concretely needed to set up a complete SFC model for policy analysis from scratch.

2.1 Module 1: Behind SFC models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics

The first training programme, titled "*Behind SFC Models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics*", was delivered by Professor Marco Missaglia from the University of Pavia, Italy.

Curriculum Vitae of Professor Marco Missaglia

Professor Missaglia earned his Ph.D. in Economics at the University of Pavia, specialising in Development Macroeconomics. He is currently an Associate Professor of International Macroeconomics at the same institution. Professor Missaglia has extensive international teaching experience, having spent three years (2012-2015) teaching Macroeconomics and Computable General Equilibrium Modelling at the Universidad Nacional de Colombia in Bogotá. From 2015 to 2017, he taught Advanced Macroeconomics at FLACSO (Facultad Latinoamericana de Ciencias Sociales) in Quito, Ecuador, where he further developed his research interests in Macroeconomics for Development. His academic work is rooted in the post-Keynesian tradition, and his papers have been published in journals such as *Metroeconomica*, *Economic System Research*, *Journal of Policy Modelling*, and *Review of Political Economy*. Professor Missaglia also serves as the Director of the Master's Program in Cooperation and Development at the University of Pavia, which is part of the Cooperation and Development Network (CDN), a consortium of twin programmes across Colombia (Cartagena de Indias and Barranquilla), Palestine (Bethlehem), Kenya (Nairobi), and Nepal (Kathmandu). In 2019, he collaborated with Professor Gennaro Zezza (University of Cassino) to offer courses on Stock-Flow Consistent models at the University of Bethlehem, Palestine, for Palestinian National Authority officials.

Course contents

The first training programme combined lectures and hands-on workshops aimed at providing the involved researchers with ideas on the theoretical backgrounds of SFC models.

This course explored several fundamental theoretical topics, contrasting Mainstream theories with Structuralist and Post-Keynesian (PK) perspectives:

1) Macro Causality

New consensus: Principle of effective demand in the short run, Say's law in the medium-long run.

Structuralist and PK: Say's law never holds; the long run is merely an extension of short run dynamics.

2) Technology & firms

Mainstream: technology is a menu of infinite techniques; Substitution is instantaneous and with no cost.

Structuralist and PK: in any moment in time, technology is given by a unique (Leontief) combination of inputs. Substitution is possible, but it takes time and it is

costly; Firms do not decide the quantity to be produced, but the capacity to be installed.

3) Distribution

Mainstream: based on marginal productivities, everyone gets what is deserved.

Structuralist and PK: marginal products are not even defined, distribution is governed by socio-political factors.

4) History

Mainstream: In most cases, stable long run equilibrium is unique.

Structuralist and PK: In most cases, multiple stable long-run equilibria and above all path-dependence (history matters).

5) Supply constraints

The fact that the macroeconomy is demand-driven does not mean that supply factors cannot play a key role. On top of being theoretically unsound, purely demand-driven models in several instances are unrealistic. In this respect, the structuralist approach is somehow richer than pure PK.

6) Money

Endogenous in both approaches, but for very different reasons.

In order to familiarize with the Eviews software and in general with computer coding, the purely theoretical models were turned from the continuous to discrete time and written and solved in Eviews with fictitious data. The idea of endogenous money in an open economy framework was illustrated by discussing the issue of dollarization. This was done by illustrating a theoretical model on dollarization and turning it into the corresponding Eviews code. Finally, again with the purpose of familiarizing a bit further with the Eviews software, balance sheet matrices and social accounting matrices, participants wrote the SFC version of the *IS-LM* model, both in the traditional exogenous money version and in a more realistic endogenous money version.

The course enabled the involved researchers and teachers to critically engage with macroeconomic debates relevant to Latin America, particularly in the contexts of Bolivia and Colombia. It also provided them with the tools to evaluate various theoretical approaches underpinning SFC models used in policy analysis and forecasting. Through the module, participants gained a solid understanding of the fundamentals of Structuralist and PK macroeconomics, being able to distinguish these approaches from mainstream neoclassical theories. They also developed an understanding of why Structuralist and PK frameworks are essential for addressing macroeconomic challenges in Latin America, with a special emphasis on Bolivia and Colombia.

Implementation modality

The present module consisted of 60 hours of training, divided into two separate 30-hour sessions: one held in Colombia and the other one held in Bolivia. Both sessions covered the same content, ensuring consistency in the material delivered.

The consortium decided that Professor Marco Missaglia would travel both to Colombia and Bolivia to deliver the training programmes, rather than having all the trainees travelling to a single location, in order to minimise the travel requirements associated with the training.

The consortium also saw this as an opportunity for Ms. Dalila Formica, MAJIG Project Manager at the University of Pavia (UNIPV), to accompany Professor Missaglia, allowing her to meet with the representatives from the Latin American partner institutions and discuss administrative issues and any other relevant pending matters.

The Colombian training session was conducted from November 20, 2023 to November 24, 2023. The event was jointly hosted by Universidad de La Salle (ULSA) and Universidad Nacional de Colombia (UNAL).

The 14 attendees - 9 male and 5 females - belonged to the MAJIG Colombian partner Institutions, namely Universidad Nacional de Colombia (UNAL), Universidad de La Salle (ULSA) and Universidad de Cartagena (UdeC).

Participants from Universidad de Cartagena (UdeC) travelled from Cartagena de Indias to Bogotá for in-presence attendance. All the travel, accommodation and subsistence expenses were covered through the MAJIG funds and autonomously managed by the sending Institution.

The University of Pavia (UNIPV) arranged the travel for Professor Marco Missaglia and Miss Dalila Formica from Italy to Colombia, covering all associated costs through the MAJIG funds.

The Bolivian training week was conducted in La Paz, Bolivia, from November 27, 2023 to December 1, 2023. This session was hosted by Universidad Mayor de San Andrés (UMSA).

The 17 attendees - 13 male and 4 females - belonged to the MAJIG Bolivian partner Institutions, namely Universidad Mayor de San Andrés (UMSA) and Universidad Mayor de San Simón (UMSS).

Participants from Universidad Mayor de San Simón (UMSS) travelled from Cochabamba to La Paz for in-presence attendance. As with the training in Colombia, all the travel, accommodation and subsistence expenses were autonomously managed by the sending Institution and covered through the MAJIG funds.

The hosting institution also provided daily coffee breaks and lunches, the costs of which were covered through the MAJIG funds.

The University of Pavia (UNIPV) organised the mobility of Professor Marco Missaglia and Miss Dalila Formica from Colombia to Bolivia and from Bolivia back to Italy, ensuring that the travel, accommodation and subsistence costs were covered through the MAJIG funds.

2.2 Module 2: Theoretical SFC models and data requirement

The second training programme, titled "*Theoretical SFC models and data requirement*", was delivered by Professor Michalis Nikiforos from the University of Geneva, Switzerland and the University of Pavia, Italy.

In order to achieve a more effective and successful implementation of the MAJIG Project, indeed, the University of Pavia (in charge of the overall coordination of the project) has made recourse to the professional services provided by professor Michalis Nikiforos, who is a world expert in the field of SFC macro modelling. On top of being the author or co-author of important scientific articles applying the SFC methodology to the Greek and US economies, he wrote together with professor Gennaro Zezza from the University of Cassino and Southern Lazio a very important survey on this topic (https://www.levyinstitute.org/pubs/wp_891.pdf), showing how a "generic" SFC model may be extended to address issues such as financialization and income distribution, labour market reforms and job creation, climate change and economic growth,.

Curriculum Vitae of Professor Michalis Nikiforos

Michalis Nikiforos is an Associate Professor of Political Economy at the Department of History, Economics and Society of the University of Geneva and a Research Scholar at the Levy Economics Institute of Bard College in New York. His research interests include macroeconomic theory and policy, the relation between distribution of income and economic growth, political and economic fluctuations, as well as the political economy of the Eurozone.

At the Levy Institute he has worked on the SFC macroeconomic model of the Institute for the US economy, and he contributed to the construction of a similar model for Greece. He has co-authored several policy reports on the prospects of the US and European economies using these applied SFC models. Together with Gennaro Zezza they have co-authored a recent paper on the SFC approach published in the Journal of Economic Surveys which has become one of the main reference points in this literature. They have also co-authored the related entry in The New Palgrave Dictionary of Economics.

Nikiforos holds a BA in economics and an M.Sc. in economic theory from the Athens University of Economics and Business, and an M.Phil. and a Ph.D. in economics from the New School for Social Research.

Course contents

The second training programme alternated between three types of activities: lectures, exercise and workshop sessions.

Professor Michalis Nikiforos went over the basics of SFC modelling and discussed in detail the system of national and financial accounts (and how SFC models are based on them) as well as how SFC models have been used for policy analysis.

During the lectures, a step-by-step approach was used to collaboratively build various theoretical SFC models, progressing from simpler to more complex structures. Using the E-Views software, participants gained hands-on experience in setting up and solving these models. Each model's specific data requirements were also outlined and discussed in detail.

In the computer-based sessions, participants modified the previously constructed models, applied different assumptions and used the models to analyse concrete macroeconomic issues. The workshops were similarly practical, encouraging participants to tailor sessions based on their own motivations and proposals.

The course enabled the involved teachers and researchers to connect the theoretical concepts from the first MAJIG course with the SFC models developed in this second module. Participants also learned how to identify the data requirements for specific SFC models, interpret and adapt existing models, build custom models to address policy questions, replicate benchmarks and run simulations in E-Views.

By the end of the training, the involved teachers and researchers were able to build theoretical SFC models in E-Views, replicate benchmarks, simulate various SFC scenarios and develop tailored SFC models that incorporated key characteristics of the Bolivian and Colombian economies.

Implementation modality

The present module totalized 30 hours of training. Indeed, due to personal reasons, Professor Michalis Nikiforos was unable to conduct two consecutive weeks of training as initially planned. Consequently, all participating teachers and researchers from the Latin American partner institutions were required to travel to ensure their in-person attendance for the single session.

The course took place in Bogotá, Colombia, from December 11, 2023 to December 15, 2023. The event was jointly hosted by Universidad de La Salle (ULSA) and Universidad Nacional de Colombia (UNAL).

The 27 attendees - 19 male and 8 females - belonged to the MAJIG Colombian and Bolivian partner Institutions, namely Universidad Nacional de Colombia (UNAL), Universidad de La Salle (ULSA), Universidad de Cartagena (UdeC), Universidad Mayor de San Andrés (UMSA) and Universidad Mayor de San Simón (UMSS).

Participants from Universidad de Cartagena (UdeC), Universidad Mayor de San Andrés (UMSA) and Universidad Mayor de San Simón (UMSS) travelled to Bogotá for in-presence attendance. All the travel, accommodation and subsistence expenses were managed by the respective sending institutions and covered through the MAJIG funds.

The hosting institutions also provided daily coffee breaks and lunches, the costs of which were covered through the MAJIG funds.

The University of Pavia (UNIPV) arranged the travel for Professor Michalis Nikiforos from Geneva to Bogotá and back, covering all associated travel, accommodation and subsistence costs through the MAJIG funds.

2.3 Module 3: Applied SFC Modelling

The third training programme, titled "*Applied SFC Modelling*", was delivered by Professor Gennaro Zezza from University of Cassino and Southern Lazio, Italy.

Curriculum Vitae of Professor Gennaro Zezza

Gennaro Zezza is Professor of Economics and Applied Econometrics at the University of Cassino and Southern Lazio. He graduated in Economics in Napoli with Augusto Graziani, the Italian founder of the Monetary Theory of Production, and started his career as an economist with a Research position at the Department of Applied Economics in Cambridge (UK), led at the time by Wynne Godley. He later obtained a position in the Italian university, and when Godley moved to the United States to join the Levy Economics Institute he also started to collaborate with the Levy Institute. His main area of research is in post-Keynesian SFC modelling. He published theoretical contributions on SFC models in academic journals and books. Working with the late Wynne Godley in the UK, Denmark and the US, he has contributed to the development of the post-Keynesian SFC approach to the analysis of monetary economies and he has been teaching the SFC methodologies in PhD and Master's programs, as well as in Summer Schools, in the United States, Mexico, Palestine, and several countries in Europe.

Course contents

The third training programme alternated between three types of activities: lectures, exercise and workshop sessions. Participants were guided through a structured process of data organization, model estimation and the development of SFC models, with a focus on Bolivia and Colombia.

In the first part of the training, participants were introduced to key concepts related to organizing data and estimating parameters for SFC models. The session covered several fundamental steps involved in building and analyzing economic models. Indeed, participants learned the distinction between exogenous and endogenous variables, the difference between recursive and simultaneous equations and how these affect the model structure and solution methods. They also explored the differences between steady-state models (where the economy is assumed to be in equilibrium) and steady-growth models (which assume the economy grows over time), guiding participants in selecting the appropriate framework for their analysis. They were shown how to align national accounts data with the specific requirements of an SFC model, identifying potential gaps and mismatches between real-world data and model needs.

Participants learned to use the E-views software to organize and prepare data for model construction, familiarizing themselves with data manipulation and processing techniques. They learned various techniques for estimating model parameters from the data, a critical step for ensuring the accuracy and reliability of the model predictions. They used the model to simulate economic conditions based on historical data, understanding the model behavior under different scenarios. Finally, they learned how to use the model for projecting future economic trends, being able to explore potential outcomes under different assumptions.

In the second part of the training, Professor Zezza focused on explaining the practical steps for constructing an empirical model. The involved teachers and researchers were introduced to the relevant time series data available for these countries, crucial for calibrating the SFC model. They examined the key structural characteristics of the economies of Bolivia and

Colombia, such as production sectors, key industries and economic interrelations, which influenced the design of the model. Despite some difficulties in finding available data, both for Colombia and Bolivia, participants got practice in collecting and organizing data specific to Bolivia and Colombia. Finally, they were guided through the development of key equations that represent the main economic relationships in the SFC model for Bolivia and Colombia, including equations for production, consumption, investment and government spending.

Implementation modality

The present module totalized 60 hours of training, divided into two separate sessions of 30 hours each. Both sessions covered the same content, ensuring consistency in the material delivered.

As for the first training module, the consortium decided that Professor Gennaro Zezza would travel both to Colombia and Bolivia to deliver the training programmes, rather than having all trainees travelling to a single location, in order to minimise the travel requirements associated with the training.

Thirty hours of training were conducted in Bogotá, Colombia, from February 12, 2024 to February 16, 2024. The event was jointly hosted by Universidad de La Salle (ULSA) and Universidad Nacional de Colombia (UNAL).

The 13 attendees - 10 male and 3 females - belonged to the MAJIG Colombian partner institutions, namely Universidad Nacional de Colombia (UNAL), Universidad de La Salle (ULSA) and Universidad de Cartagena (UdeC).

Participants from Universidad de Cartagena (UdeC) travelled from Cartagena de Indias to Bogotá for in-presence attendance. All the travel, accommodation and subsistence expenses were covered through the MAJIG funds and autonomously managed by the sending Institution.

The University of Cassino and Southern Lazio (UNICLAM) arranged the travel for Professor Gennaro Zezza from Italy to Colombia, covering all the associated costs through the MAJIG funds.

Another 30 hours of training were conducted in La Paz, Bolivia, from February 19, 2024 to February 23, 2024. This session was hosted by Universidad Mayor de San Andrés (UMSA). The 13 attendees - 10 male and 3 females - belonged to the MAJIG Bolivian partner Institutions, namely Universidad Mayor de San Andrés (UMSA) and Universidad Mayor de San Simón (UMSS).

Participants from Universidad Mayor de San Simón (UMSS) travelled from Cochabamba to La Paz for in-presence attendance. As with the training in Colombia, all the travel, accommodation and subsistence expenses were autonomously managed by the sending Institution and covered by the MAJIG funds. The hosting institution also provided daily coffee breaks and lunches, the costs of which were covered through the MAJIG funds.

The University of Cassino and Southern Lazio arranged the mobility of Professor Gennaro Zezza from Colombia to Bolivia and from Bolivia back to Italy, ensuring that the travel, accommodation and subsistence costs were covered through the MAJIG funds.

2.4 Module 4: Detailed programme, Learning outcomes

The fourth training programme, titled “*Environmental Stock-Flow Consistent Input-Output models*” was delivered by Professor Sebastian Valdecantos from Aalborg Universitet, Denmark.

Curriculum Vitae of Professor Sebastian Valdecantos

Sebastian Valdecantos has a Ph.D. in Economics from the Sorbonne Paris Nord University. He currently serves as Assistant Professor of Macroeconomics at Aalborg University (Denmark). After the completion of his Ph.D. he worked for 5 years at UN-ECLAC. He also taught courses on Macroeconomics at the National Universities of San Martín and Mar del Plata (both of them in Argentina). In 2020 he served as National Director of Cooperative and Mutual Development at the Ministry of Productive Development of Argentina. His research interests focus on the macroeconomic vulnerabilities of developing economies. Most of his work is undertaken through the Stock-Flow Consistent approach.

Course contents

The training began with an introduction to input-output (IO) analysis, which focuses on the structure of economic production systems. Participants learned how IO tables can represent an economy's production structure and were introduced to essential concepts like multipliers (i.e. output and employment multipliers). Using real-world data, particularly from Bolivia and Colombia, participants practiced applying IO tables to address economic analysis challenges, understanding how production structures affect economies.

Afterwards, participants advanced their learning by combining IO analysis with SFC models. The aim was to represent the Latin American economies of Bolivia and Colombia in a more realistic and dynamic way. After developing a theoretical understanding of how SFC-IO models work, participants integrated real-world IO data with National Accounts data to construct empirically grounded models. These models were used to simulate and analyze macroeconomic challenges in these countries, enabling participants to explore how different economic structures and patterns of specialization can influence policy and economic outcomes.

Finally, Professor Valdecantos expanded the topic, by introducing environmental data into the economic models. The involved teachers and researchers learned how to combine economic and environmental accounts to create integrated assessment models. They explored how to integrate environmental data such as energy use and greenhouse gas emissions into both the IO tables and the SFC-IO models previously developed. Finally, they examined how economic policy could address the challenges of transitioning to a low-carbon economy, utilizing the environmental SFC-IO models for simulation and prospective analysis.

Implementation modality

The present module totalized 60 hours of training, divided into two separate sessions of 30 hours each. Both sessions covered the same content, ensuring consistency in the material delivered.

As for the first and third training modules, indeed, the consortium decided that Professor Sebastian Valdecantos would travel to both Colombia and Bolivia to deliver the training programmes, rather than having all trainees travel to a single location, in order to minimise the travel requirements associated with the training.

Thirty hours of training were conducted in Bogotá, Colombia, from May 20, 2024 to May 24, 2024. The event was jointly hosted by Universidad de La Salle (ULSA) and Universidad Nacional de Colombia (UNAL).

The 15 attendees - 11 male and 4 females - belonged to the MAJIG Colombian partner institutions, namely Universidad Nacional de Colombia (UNAL), Universidad de La Salle (ULSA) and Universidad de Cartagena (UdeC).

Participants from Universidad de Cartagena (UdeC) travelled from Cartagena de Indias to Bogotá for in-presence attendance. All the travel, accommodation and subsistence expenses were covered by the MAJIG funds and autonomously managed by the sending Institution.

The University of Aalborg (AAU) arranged the travel for Professor Sebastian Valdecantos from Denmark to Colombia, covering all associated costs through the MAJIG funds.

Another 30 hours of training were conducted in La Paz, Bolivia, from May 27, 2024 to May 31, 2024. This session was hosted by Universidad Mayor de San Andrés (UMSA).

The 12 attendees - 9 male and 3 females - belonged to the MAJIG Bolivian partner Institutions, namely Universidad Mayor de San Andrés (UMSA) and Universidad Mayor de San Simón (UMSS).

Participants from Universidad Mayor de San Simón (UMSS) travelled from Cochabamba to La Paz for in-presence attendance. As with the training in Colombia, all the travel, accommodation and subsistence expenses were autonomously managed by the sending Institution and covered through the MAJIG funds.

The hosting institution also provided daily coffee breaks and lunches, the costs of which were covered by the MAJIG funds.

The University of Aalborg (AAU) arranged the mobility of Professor Sebastian Valdecantos from Colombia to Bolivia and from Bolivia back to Denmark ensuring that the travel, accommodation and subsistence costs were covered by the MAJIG funds.

3. Recognition of the learning and training assessment

In the month leading up to the start of the training programmes, the Colombian and Bolivian partners independently carried out the selection process. Each of them identified 5 among the most motivated teachers and researchers within their institutions who were eager to learn about SFC macroeconomic models for policy analysis and forecasting, for a total of 25 officially selected teachers and researchers.

In addition to the formally selected participants, other teachers and researchers from the MAJIG Latin American partner institutions were also given the chance to informally attend the training, even if they were not selected for the core group.

Nevertheless, the training programmes primarily targeted the selected teachers and researchers, as they are expected to lead the research activities once the Research Units are established at each of the five Latin American partner institutions.

Invitation Letters

Invitation letters were drafted and signed by the MAJIG Project Coordinator, Professor Marco Missaglia. These letters were then provided to each Latin American partner institution prior to the start of each training module.

Below is the template of the invitation letters submitted:

dd/mm/yyyy

[Beneficiary's Representative Name]

Team Leader of [Beneficiary name]

Macroeconomics for Justice and Inclusive Growth - MAJIG Project

Ref.: Project training activities in [City, Country]

Dear Prof. [Beneficiary's Representative Name],

According to the Project activities defined in the Project Kick-off Meeting held in Cartagena (Colombia) from the 18th to the 20th of April 2023, the MAJIG Project has established a training program for the researchers of the Latin American partner institutions.

The onsite training program of Module [Training module name] will take place from dd/mm/yyyy to dd/mm/yyyy and it will be organized in [City, Country] at [Name of the hosting institution].

For this purpose, it is required that [Beneficiary name] research team travels to [Bogotá/La Paz] on the dates mentioned above.

The persons involved from your institution are:

1. List of the selected teachers/researcher from [Beneficiary name]

Best regards,

Marco Missaglia

MAJIG Project Coordinator

University of Pavia - UNIPV

Certificate of attendance

After the completion of each training module, the coordinating institution, the University of Pavia (UNIPV), issued certificates of participation to each of the participating professors and researchers. These certificates were signed by the Project Coordinator, Professor Marco Missaglia, and consisted of two separate documents:

- Graphic certificate, featuring the course name, training title and training dates. It served as a visual certificate of participation.
- PDF certificate, providing the same information as the graphic certificate but including additional details, such as the specific training contents and the skills acquired during the course.

Below are the pictures of the issued certificates' template:

- Certificate 1:



CERTIFICATE OF PARTICIPATION



THIS IS PRESENTED TO

Attendees Name

for participating in the MAJIG training
"Training Module Name"
provided by
Professor Name - Belonging Institution

MARCO MISSAGLIA

Project Coordinator

Pavia, dd/mm/yyyy

- Certificate 2:



MAJIG
MACROECONOMICS FOR JUSTICE AND INCLUSIVE GROWTH

[Training Module Name]

CERTIFICATE OF PARTICIPATION

This is to certify that [Participant Name] has successfully completed the Training Program [training module Name] provided by [Professor Name] from [belonging institution].

The training program was held from [dd/mm/yyyy] to [dd/mm/yyyy] in [city, country] and it was developed within the framework of the Erasmus+ Project "Macroeconomics for Justice and Inclusive Growth" (MAJIG) co-financed by the European Commission.

The training program was designed to strengthen participants' knowledge in the field of macroeconomic modeling for progressive and inclusive growth. Specifically, the training pursued the following learning goals:

- [list of the module learning goals]

[Participant Name] has demonstrated the ability to:

- [list of the skills acquired]

Pavia, dd/mm/yyyy

Marco Missaglia
MAJIG Project Coordinator
University of Pavia - UNIPV

Evaluation Questionnaires

At the end of each training programme, the involved teachers and researchers were asked to answer an evaluation questionnaire. The questionnaires assessed satisfaction and effectiveness across various aspects of the module, using a rating scale from 1 (strongly disagree) to 5 (strongly agree). Below is the template of the evaluation questionnaire submitted:

	1	2	3	4	5
A. Module objectives					
1 – The module's learning goals were clearly stated					
2 – The module covered the topics I expected					
3 – The time allocated to each topic was good					
4 – All the contents in the module were successfully covered					
5 – There was a good balance between theoretical and practical activities (if applicable)					
B. Module presentation					
1 – The course structure was easy to understand and follow					
2 – The topics were presented in logical order					
3 – I had enough time in class to practise the skills learned in the module					
4 – All the required material was available in due time					
5 – All the practical matters required for the course worked well (WiFi, IT, etc.)					
C. Instructor					
1 – The instructor was well prepared					
2 – The instructor communicated the contents clearly					
3 – The instructor was able to answer questions and clear my doubts					
4 – I received enough feedback on the practical activities of the module (if applicable)					
5 – Prior to the start of the module I received all the required material and information					
D. Overall impression					
1 – The module was worth the time I invested					
2 – With my prior knowledge I was well prepared to follow the contents of the module					
3 – I acquired a good understanding of the topics learned in the module					
4 – The contents and skills learned in the module will be useful in my future work-					
5 – I would recommend this course to other researchers working on my field					
Please, tell us about any aspects you appreciated of the module.					
Please, tell us what could be improved for the next time.					

4. Key Performance Indicators

Attendees target number

In line with the targets outlined in the Project Grant Agreement (Nr. 101083194), the initial goal was to train 25 participants. The consortium considers the target as successfully met. Indeed:

- In the first module of the MAJIG training programmes, 31 trainees in total were registered.
- In the first module of the MAJIG training programmes, 27 trainees in total were registered.
- In the first module of the MAJIG training programmes, 26 trainees in total were registered.
- In the first module of the MAJIG training programmes, 27 trainees in total were registered.

Training target duration

Regarding the training duration, each module was expected to consist of 30 hours of training, as specified in the Project Grant Agreement (Nr. 101083194). This target was fully met, with the following total training hours provided:

- 60 hours for the first module (30 hours in Colombia and 30 hours in Bolivia)
- 30 hours for the second module
- 60 hours for the third module (30 hours in Colombia and 30 hours in Bolivia)
- 60 hours for the fourth module (30 hours in Colombia and 30 hours in Bolivia)

Evaluation questionnaires' analysis

- Module 1 "*Behind SFC models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics*"

The evaluation questionnaires for the current module indicate high levels of commitment and satisfaction with the course content.

The first section, titled *Module Objectives*, evaluated the effectiveness, comprehensiveness and balance of the course, receiving an average rating of 4.9.

The second section, titled *Module Presentation*, focused on the organization, accessibility and logistical support of the course, achieving an average rating of 4.8.

The third section, titled *Instructor*, assessed the instructor's performance, communication effectiveness and the provision of necessary materials and feedback, receiving an average rating of 4.9.

The fourth section, titled *Overall Impressions*, inquired about the overall value, relevance, and impact of the module on the participants' learning experience and future professional work, receiving an average rating of 4.9.

Based on these ratings, the module received an overall average rating of 4.9.

Here are some quotes from the evaluation forms:

- ❖ "I really enjoyed the class, I learned a lot and the professor was so prepared",
- ❖ "The course was excellent, it has managed to question my position in relation to macroeconomic models, it has "moved the floor" and it is a theory that accompanies my political and ideological position. It was very useful, and I am very happy with it",
- ❖ "I really appreciate Professor Missaglia's ability to disseminate knowledge related to Stock Flow Consistent models based on practical and in-depth examples. I appreciate the material shared and the practical advice, which was extremely helpful for the next module"

More attendees' testimonies are accessible in the Annex 2.

- Module 2 "*Theoretical SFC models and data requirement*"

The evaluation questionnaires for the current module show a positive response to the course.

The first section, titled *Module Objectives*, evaluated the effectiveness, comprehensiveness, and balance of the course, receiving an average rating of 4.7.

The second section, titled *Module Presentation*, focused on the organization, accessibility and logistical support of the course, achieving an average rating of 4.6.

The third section, titled *Instructor*, assessed the instructor's performance, communication effectiveness, and the provision of necessary materials and feedback, receiving an average rating of 4.7.

The fourth section, titled *Overall Impressions*, inquired about the overall value, relevance and impact of the module on the students' learning experience and future professional work, receiving an average rating of 4.7.

Based on these ratings, the module received an overall average rating of 4.7.

Here are some quotes from the evaluation forms:

- ❖ "An outstanding aspect of the course is how up-to-date Professor Nikiforos is in different topics of macroeconomic theory, as well as in the empirical aspects that occur in different parts of the world. Beyond that, the analytical and reflective capacity that he contributed during all classes was quite clarifying",

- ❖ “I appreciate that this module was very good the way we introduced it to SFC”,
- ❖ “The theoretical and practical contents were very interesting and useful”.

More attendees' testimonies are accessible in the Annex 4

- Module 3 "*Theoretical SFC models and data requirement*"

The module received an overall average rating of 4.6 upon 5, demonstrating its strength and validity.

The first section, titled *Module Objectives*, evaluated the effectiveness, comprehensiveness and balance of the course, receiving an average rating of 4.7.

The second section, titled *Module Presentation*, focused on the organization, accessibility and logistical support of the course, achieving an average rating of 4.5.

The third section, titled *Instructor*, assessed the instructor's performance, communication effectiveness and the provision of necessary materials and feedback, receiving an average rating of 4.6.

The fourth section, titled *Overall Impressions*, inquired about the overall value, relevance and impact of the module on the participants' learning experience and future professional work, receiving an average rating of 4.7.

Here some quotes from the attendees:

- ❖ “The model and the way of using the data, as well as the way of covering the missing information, which in Bolivia is the most complicated topic for research, have been extremely important in this module, the fact that it was done live has been very enriching. It has been a privilege to be able to count on the teachers we have had until now”,
- ❖ “Really grateful for the opportunity to learn more about post-Keynesian models. Professor Gennaro Zezza's expertise is surprising, the way he taught and built the SFC matrices for the Bolivian case has been surprising. The patience and dedication to overcome each obstacle in Bolivia showed us the way to replicate his exercises. This course, like the rest, is highly valuable. I consider that we acquired, as long as we practice, skills that will help us in our group research”,
- ❖ “I think that the expertise, knowledge and abilities of the instructor were excellent; we are very grateful to him”.

More attendees' testimonies are accessible in the Annex 6.

- Module 4 "*Environmental Stock-Flow Consistent Input-Output Models*"

Participants' feedback indicated a high level of satisfaction with the course.

The first section, titled *Module Objectives*, evaluated the effectiveness, comprehensiveness and balance of the course, receiving an average rating of 4.9.

The second section, titled *Module Presentation*, focused on the organization, accessibility and logistical support of the course, achieving an average rating of 4.9.

The third section, titled *Instructor*, assessed the instructor's performance, communication effectiveness and the provision of necessary materials and feedback, receiving an average rating of 5.0.

The fourth section, titled *Overall Impressions*, inquired about the overall value, relevance and impact of the module on the participants' learning experience and future professional work, receiving an average rating of 4.9.

Based on these ratings, the module received an overall average rating of 4.9.

Here are some quotes from the evaluation questionnaires:

- ❖ “Professor Valdecantos has an excellent domain of Knowledge of Stock Flow Consistent Models. His expertise combined with his comprehensive teaching makes the course very understandable. Also, the materials and the use of software R to solve the equations of SFC models were easy to use. The Professor put at our disposal a set of useful tools (papers about SFC-IO models and scripts in R) that will help us develop our models for the Bolivian case. Finally, thank Professor Valdecantos, who, like the rest of the Professors, are highly committed people, rigorous in their teaching, brilliant in what they do, and very inspiring”
- ❖ “This module encompasses and improves what was learned in the previous modules, which were also excellent. My most sincere thanks to the 4 teachers for their excellent teachings”,
- ❖ “I think that one of the most important aspects that I have appreciated is the application of the model SFC to any economy”.

More attendees' testimonies are accessible in the Annex 8.

5. Post-event communication

Follow-up email to the attendees

Post event communication began with follow-up emails addressed to the involved teachers and researchers. These emails were sent after the completion of each training programme by the University of Pavia (UNIPV) via the MAJIG email address. The emails represented a useful means to thank the involved teachers and researchers for their active participation in the training and to inform them about the future submission of the certificates of participation. The involved teachers and researchers were also encouraged to complete evaluation questionnaires and share their feedback and suggestions, contributing to the ongoing improvement of future training sessions.

Social media posts

Post event communication continued through social media posts, published by the Work Package 5 leader, Universidad Mayor de San Andrés (UMSA) in collaboration with the Project Coordinating Institution. Updates on the training implementation were disseminated through the Project's official communication channels, including its website and social media accounts.

Below is the list of website and social media posts related to the MAJIG training:

- [Website posts \(english section\)](#)
- [Website posts \(spanish section\)](#)
- [Linkedin Post - module 1](#)
- [Linkedin Post - module 2](#)
- [Linkedin Post - module 3](#)
- [Linkedin Post - module 4](#)
- [Instagram Post - module 1](#)
- [Instagram Post - module 2](#)
- [Instagram Post - module 3](#)
- [Instagram Post - module 4](#)

Social media analytics show a positive responsiveness of the MAJIG audience and highlight the Project's active presence, particularly on LinkedIn. Indeed, training-related posts on this platform achieved notable visibility, averaging over 900 impressions per post, showcasing the effectiveness of the communication strategy.

6. Annexes

6.1 Annex 1: Module 1 Syllabus

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 will be delivered both in La Paz, Bolivia and Bogotá, Colombia. The course will totalize 60 hours of training in total (30 hours in Colombia and 30 hours in Bolivia) 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, neoclassically-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), *Economía Colombiana, Una Introducción Crítica*, Skepsi, Bogotá

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

6.2 Annex 2: Module 1 Evaluation questionnaires

MAJIG

Training Program - Module 1

Behind SFC models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics

Professor Marco Missaglia - University of Pavia

TRAINING EVALUATION

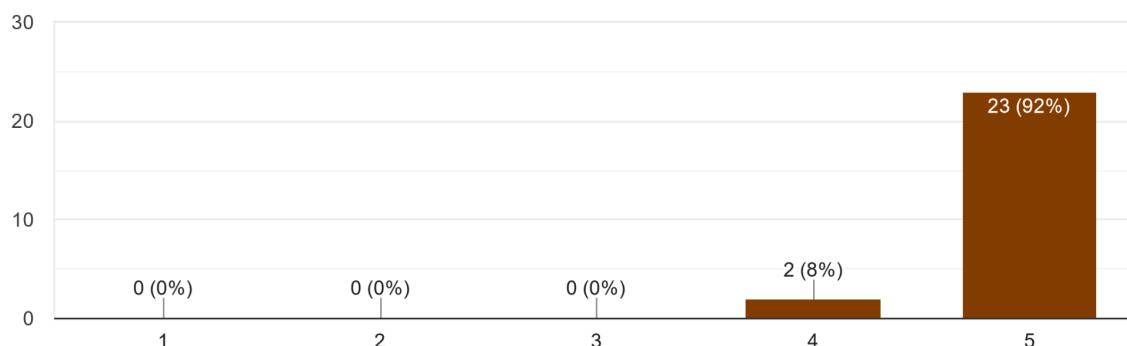
Thank you for having participated in the first module of the MAJIG training programs - Behind SFC models: Structuralist Macroeconomics and Post-Keynesian Macroeconomics - provided by Professor Marco Missaglia from University of Pavia (Italy).

Please complete the following evaluation form providing your feedback on module 1.

A. Module objectives

1. The module's learning goals were clearly stated

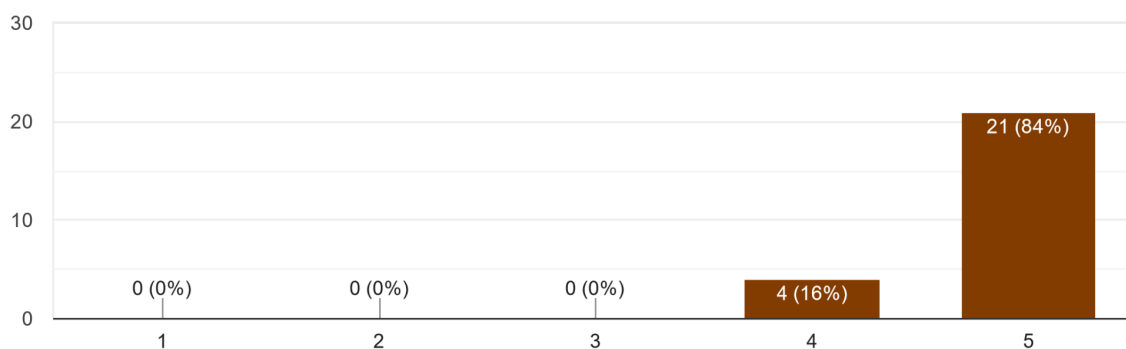
25 risposte



Average Rating = 4.9

2. The module covered the topics I expected

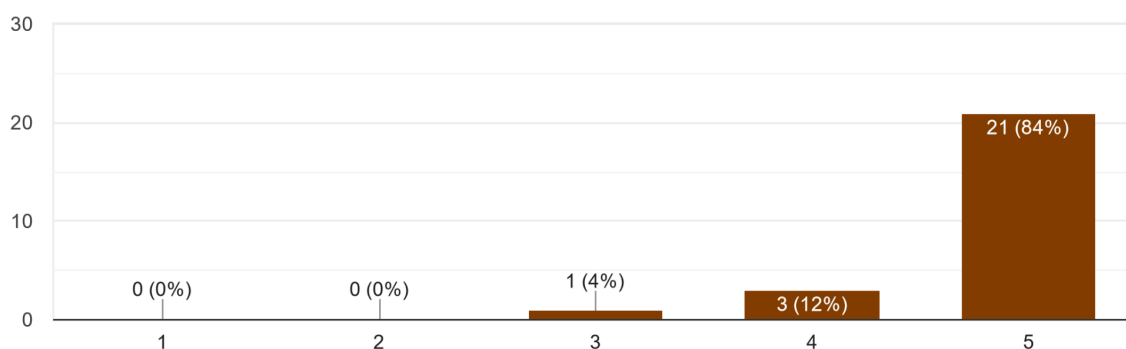
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Average Rating = 4.8

3. The time allocated to each topic was good

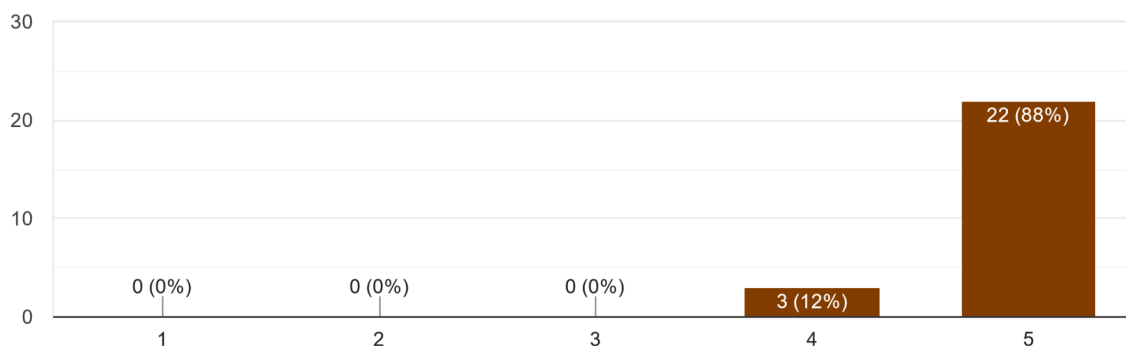
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Average Rating = 4.8

4. All the contents in the module were successfully covered

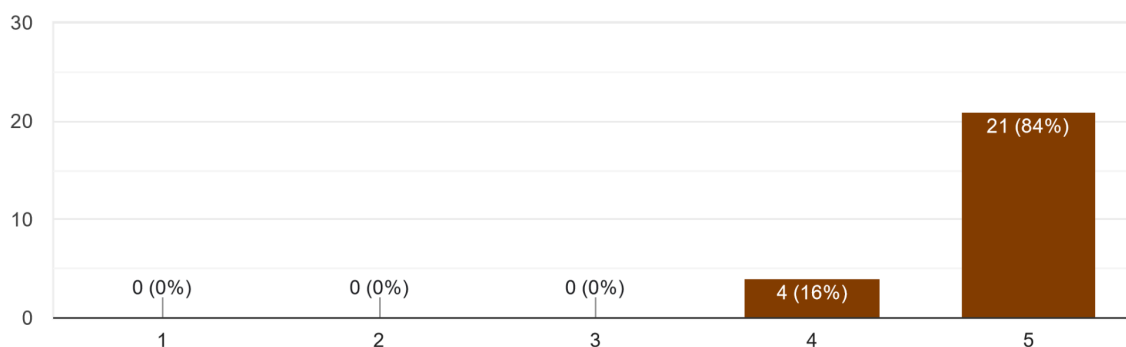
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Average Rating = 4.9

5. There was a good balance between theoretical and practical activities (if applicable)

25 response



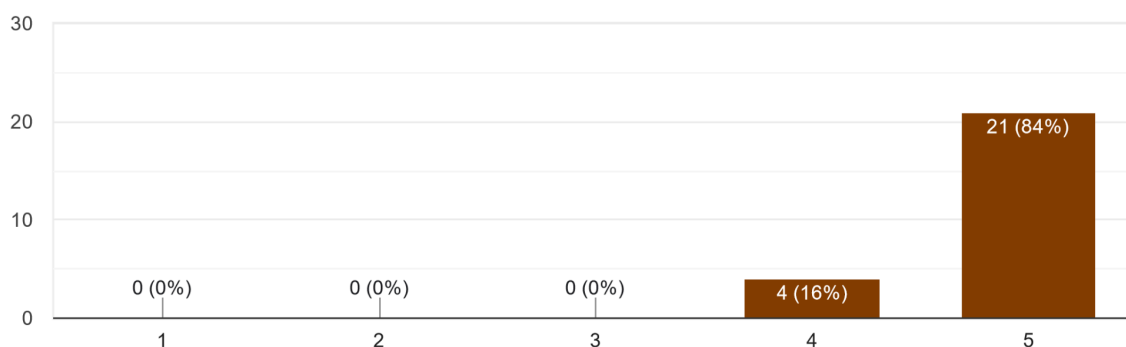
Average Rating = 4.8

“A Section” Average Rating = 4.9

B. Module presentation

1. The course structure was easy to understand and follow

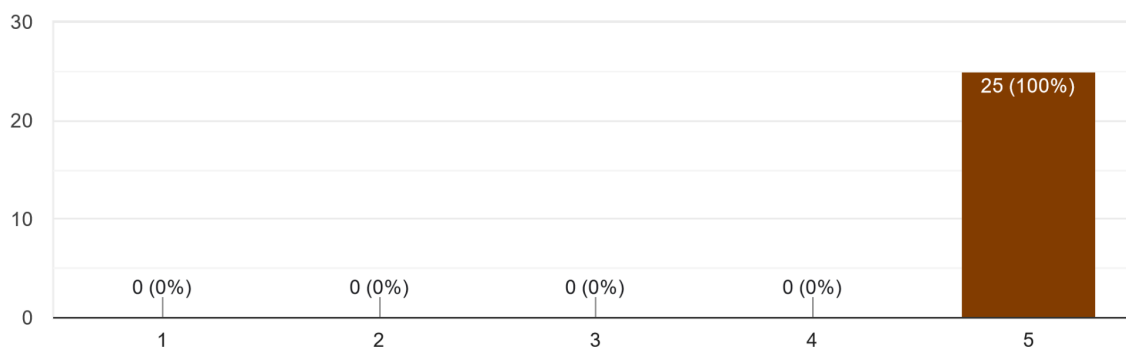
25 response



Average Rating = 4.8

2. The topics were presented in logical order

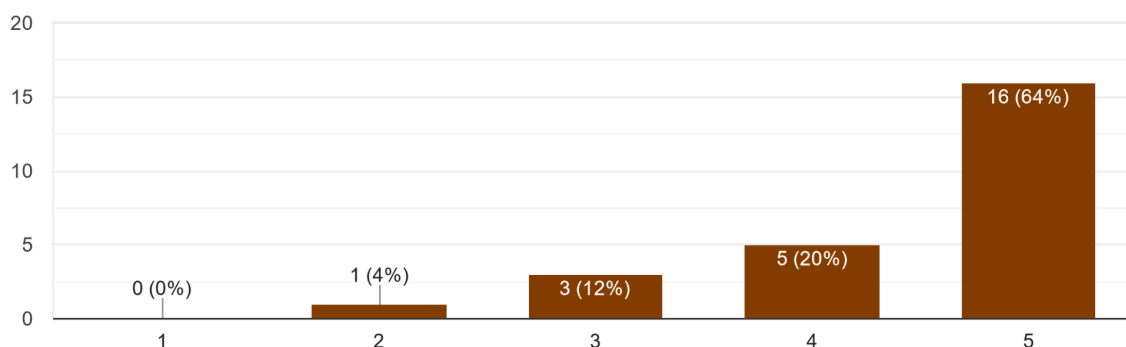
25 response



Average Rating = 5.0

3. I had enough time in class to practice the skills learned in the module

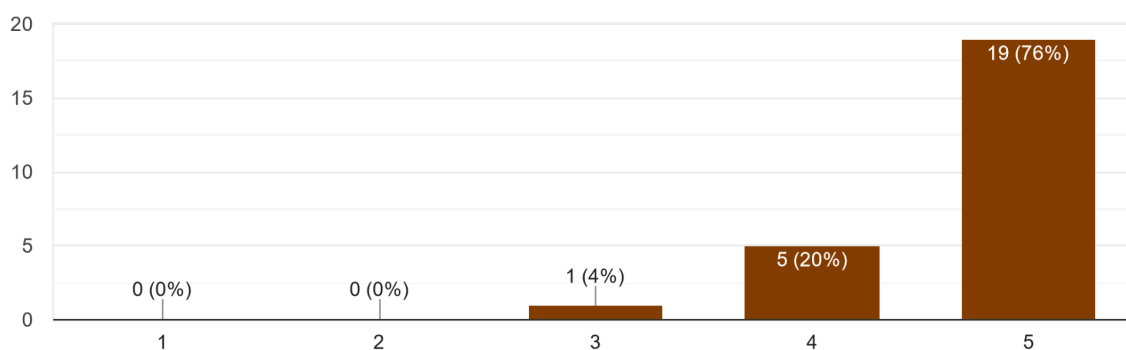
25 response



Average Rating = 4.4

4. All the required material was available in due time

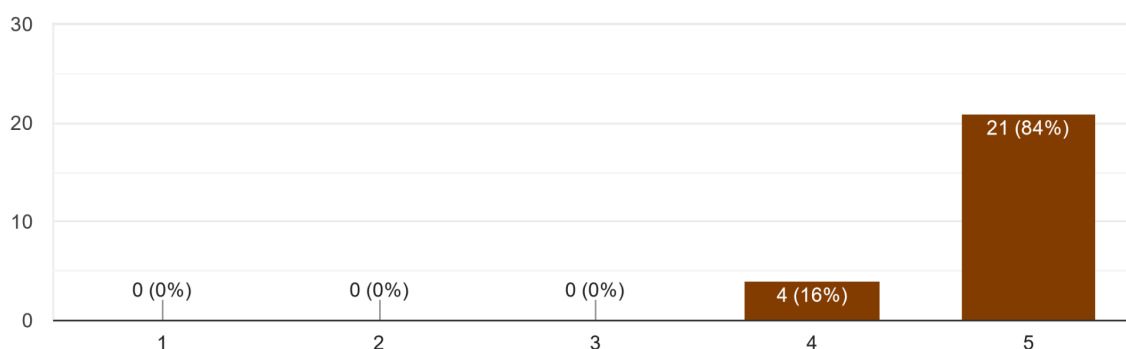
25 response



Average Rating = 4.7

5. All the practical matters required for the course worked well (WiFi, IT, etc.)

25 response



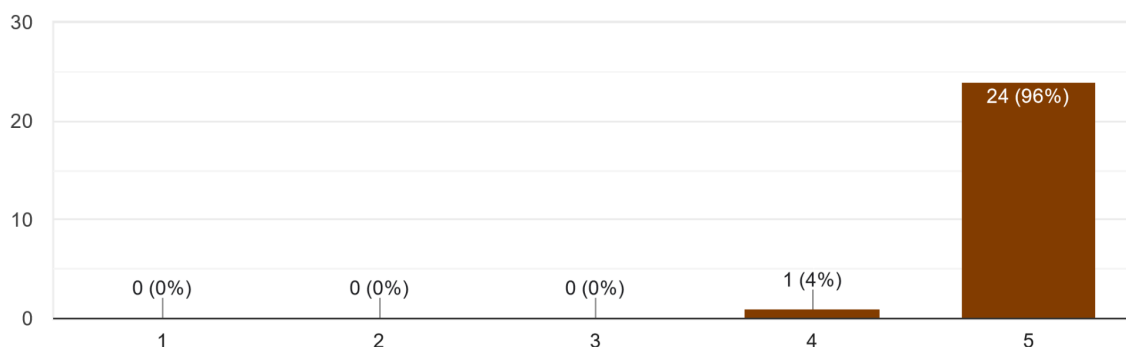
Average Rating = 4.8

“B Section” Average Rating = 4.8

C. Instructor

1. The instructor was well prepared

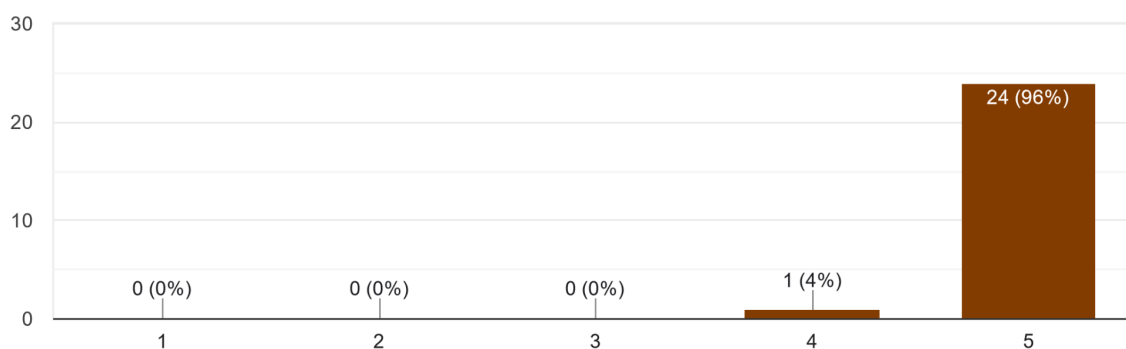
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Average Rating = 5.0

2. The instructor communicated the contents clearly

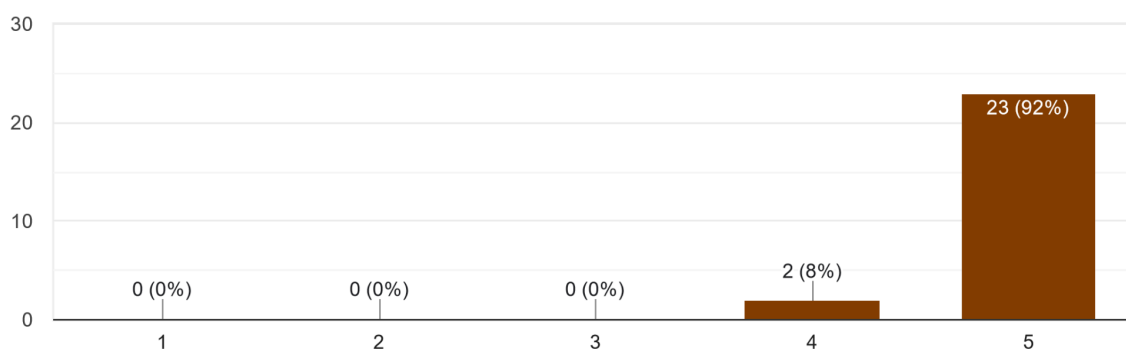
25 risposte



Average Rating = 5.0

3. The instructor was able to answer questions and clear my doubts

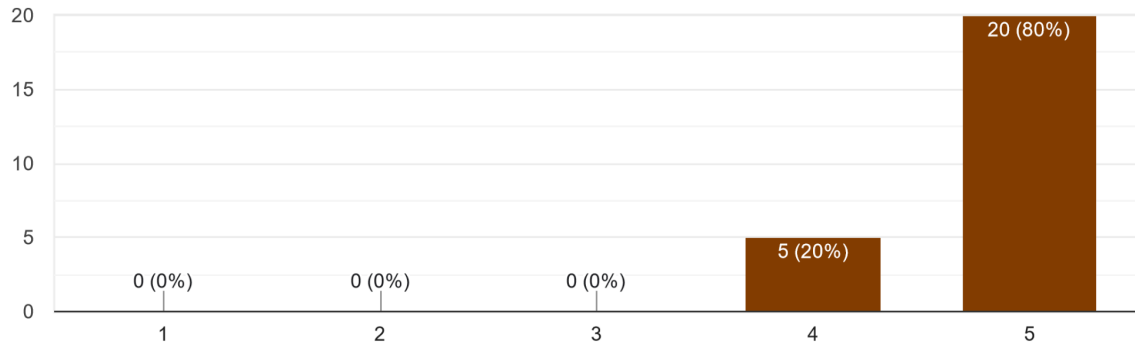
25 risposte



Average Rating = 4.9

4. I received enough feedback on the practical activities of the module (if applicable)

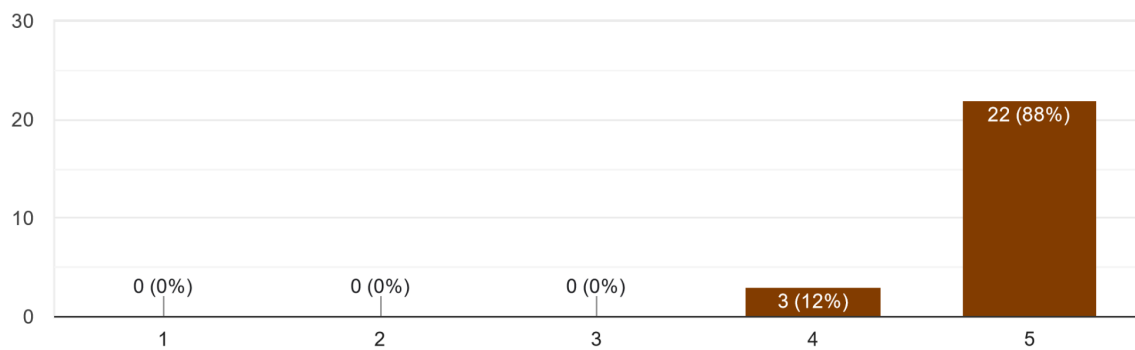
25 risposte



Average Rating = 4.8

5. Prior to the start of the module I received all the required material and information

25 risposte



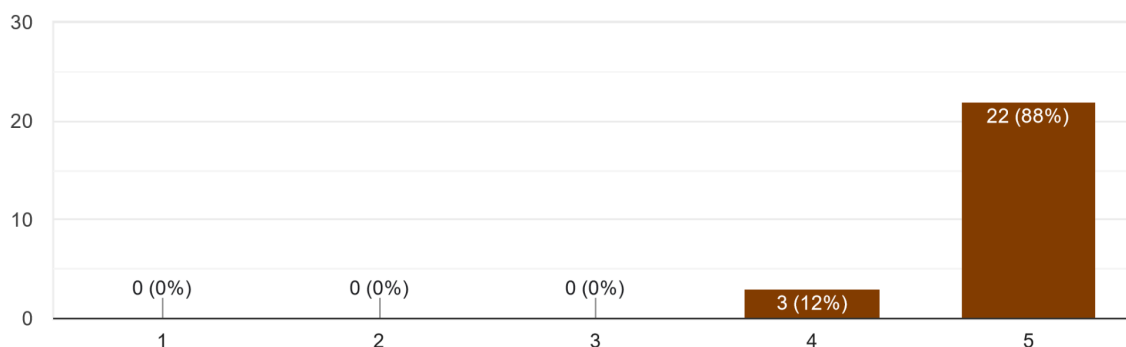
Average Rating = 4.9

“C Section” Average Rating = 4.9

D. Overall Impression

1. The module was worth the time I invested

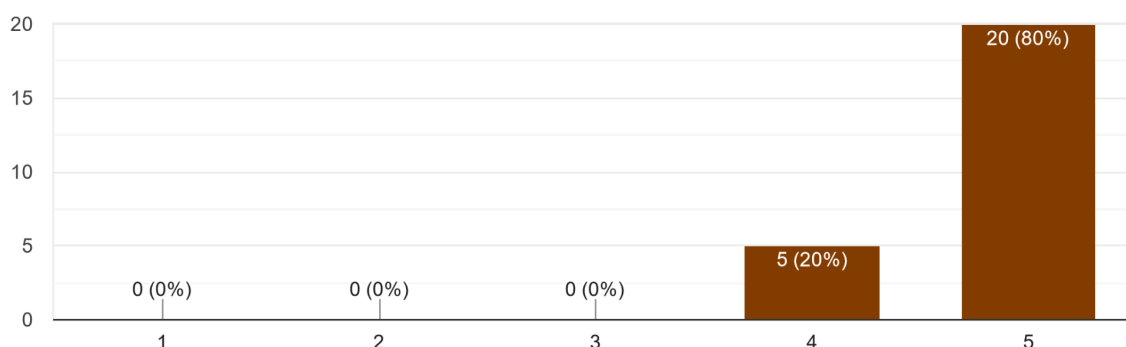
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Average Rating = 4.9

2. With my prior knowledge I was well prepared to follow the contents of the module

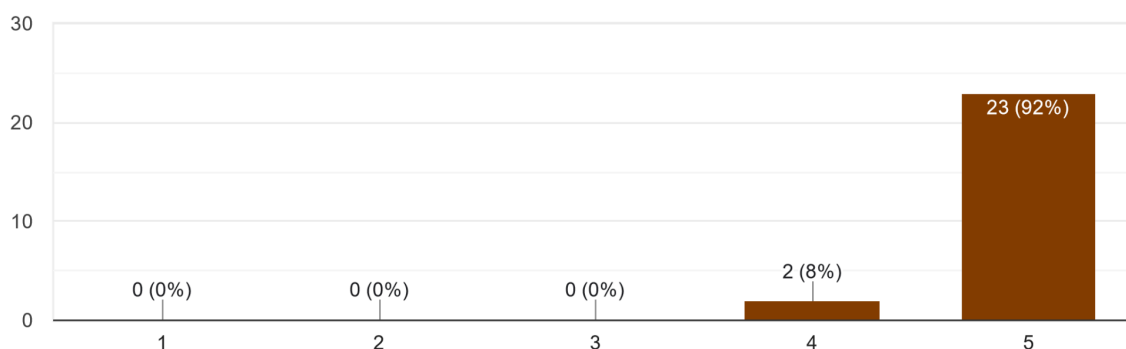
25 risposte



Average Rating = 4.8

3. I acquired a good understanding of the topics learned in the module

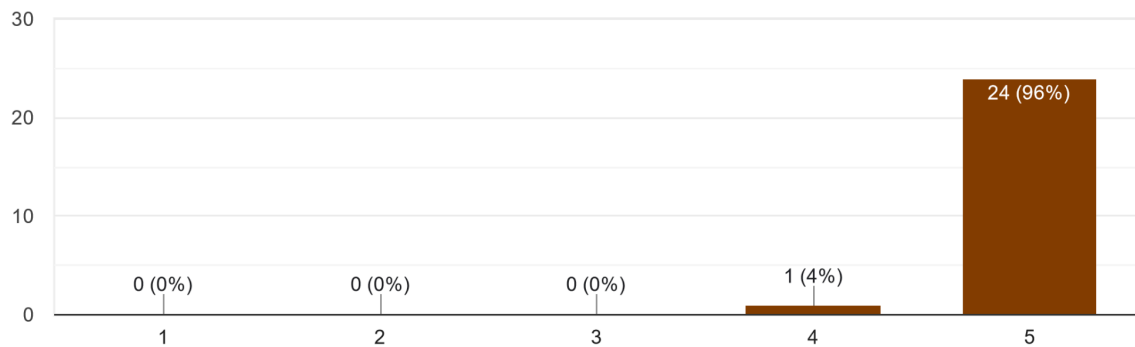
25 risposte



Average Rating = 4.9

4. The contents and skills learned in the module will be useful in my future work

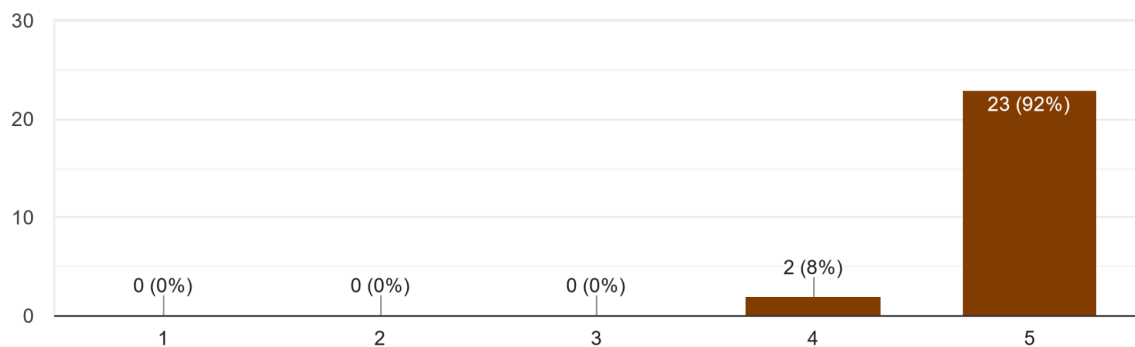
25 risposte



Average Rating = 5.0

5. I would recommend this course to other researchers working on my field

25 risposte



Average Rating = 4.9

“D Section” Average Rating = 4.9

“Module 1” Average Rating = 4.9

Please, tell us about any aspects you appreciated of the module.

- Prof Missaglia has an outstanding ability to teach complex theoretical issues in a simple and easy to grasp way.
- I really enjoyed the class, I learned a lot and the professor was so prepared.
- Interestingly and novel the topics as alternative theories and are relevant.
- I think that the new knowledge that I can learned about SFC models
- Excelent
- el conocimiento teórico y su manera de comunicar ha sido muy importante
- Excelente didáctica y claridad de ideas del profesor
- The topics were very interesting and complete.
- The course was excellent, it has managed to question my position in relation to macroeconomic models, it has "moved the floor" and it is a theory that accompanies my political and ideological position. It was very useful and I am very happy with it.
- The developed macroeconomic models are very useful for my future research on "Public Investment in Bolivia"
- The teaching and use of the software was very good, even though I had no knowledge of Eviews, the learning from professor Misaggia was positive and didactic.
- I really appreciate Professor Missaglia's ability to disseminate knowledge related to Stock Flow Consistent models based on practical and in-depth examples. I appreciate the material shared and the practical advice, which was extremely helpful for the next module.
- It is evident that Marco has an easy-to-understand methodology with concepts that are difficult.
- The instructor was very friendly and committed
- I appreciated that the presentations were very clear.
- This module was very clear, I understood everything about the fundamentals of Theoretical SFC models. I Think this could be the future of macroeconomic modeling.
- I appreciated the teacher's goodwill with the questions of students and his in-depth knowledge of theoretical foundations. The organization was great, particularly the coordination between University of Pavia and CIDES-UMSA.

Please, tell us what could be improved for the next time.

- It IS important to provide the module contents
- Maybe the schedule was a little bit disorganized but it was a good amount of hours for this kind of topic.
- Time for preparation for better understanding
- I think that all the themes were very good
- mayor tiempo de estudio
- que el curso se extienda a un módulo de doctorado, para poder trabajar el marco teórico y conceptual, y resolver las dudas con más detalle.
- Recibir material con mayor antelación para prepararlo
- They should give all the conferences in Spanish.
- The wifi was deficient in the Salle University.
- I suggest that in order to improve the course, the time between courses should be extended, since it is a very powerful course that develops new arguments, it is necessary time to assimilate everything new, before entering the modeling. Anyway, we are resilient beings, and in that sense, the course is excellent. It has met and exceeded my expectations of it.
- I think everything was fine.
- Perhaps an important point for next time is to spread more sources of information where you can read and learn more about these models. Perhaps it is good to clarify which institutions (such as the Levy Institute) are fundamental sources to read and where to find more material
- It seems to me that a good methodology has been used so far.
- The instructor ended up completely exhausted after two weeks of lecturing in two different countries (this should be taken into account)
- For me, the course was perfect. I only Think that the five days of a full sesión was hard.
- I think the time management could be improved by giving more time to analysis and discussions of SFC's theoretical basis from heterodox approaches.

6.3 Annex 3: Module 2 Syllabus

Theoretical SFC models and data requirement

Macroeconomics for Justice and Inclusive Growth

Bogota, 11-15 December 2023

Instructor:

Michalis Nikiforos
Associate Professor
Department of History, Economics and Society
University of Geneva, Switzerland

Research Scholar
Levy Economics Institute of Bard College

email: michail.nikiforos@unige.ch mnikifor@levy.org

Overview:

This training program aims to provide an introduction to stock-flow consistent (SFC) macroeconomic modeling. We will discuss the main principles of the SFC Methodology. We will explain that SFC models pay a lot of attention to the accounting structure of the models, so that there are no accounting “black holes.” Moreover, SFC methodology emphasizes the linkages between the real and financial side of the economy. These basic principles will allow us to discuss issues like the nature of money and credit, portfolio choice, and complications that arise due to international trade and financial flows. Models will be simulated with the use of computer software.

We will also study how this methodology can be used for macroeconomic policy purposes. In particular, we will examine the SFC macro model of the Levy Institute, used to produce the various “Strategic Analysis” and policy reports. We will also cover the related data sources: national income accounts, flow of funds accounts, and accounts of international trade and capital flows.

Students will create and simulate their own proper SFC model.

Course Material:

Main Textbook:

Godley, Wynne, and Marc Lavoie. 2012. *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth*. 2nd ed. 2012 edition. New York: Palgrave Macmillan. (below Godley & Lavoie, *Monetary Economics*)

Additional textbooks:

1. Taylor, Lance. 2004. *Reconstructing Macroeconomics: Structuralist Proposals and Critiques of the Mainstream*. Cambridge, MA: Harvard University Press. (below Taylor, *Reconstructing Macroeconomics*)

2. Godley, Wynne, and Francis Cripps. 1983. *Macroeconomics*. London: Fontana.

Other readings:

Other readings include several papers published in peer reviewed journals, working papers, or books as well as policy papers and reports.

Software CoDe:

During the course we will use computer software extensively to write and simulate the models we are discussing.

The website <http://models.sfc-models.net/> is a repository for software code, spreadsheets and other tools for building stock-flow-consistent models. Of special interest is the code for the several models of the Godley and Lavoie *Monetary Economics*.

Training Program Outline:

I) Introduction to Post-Keynesian Stock-Flow Consistent Models

1. Godley & Lavoie, *Monetary Economics*. chapters 1, 2
2. Nikiforos, Michalis and Gennaro Zezza. 2017. "Stock-Flow Consistent Macroeconomic Models: a Survey." *Journal of Economic Surveys* 31(5): 1204–1239.
3. Zezza, Gennaro. 2016. "Modeling the Economy as a Whole: Stock-Flow Models." In *Handbook of Research Methods and Applications in Heterodox Economics*, edited by Lee Frederic S. and Cronin Bruce, 431-44. Northampton, MA: Edward Elgar Publishing.
4. Taylor. *Reconstructing Macroeconomics*. chapter 1
5. Dos Santos, Claudio H. 2006. "Keynesian Theorising during Hard Times: Stock-Flow Consistent Models as an Unexplored 'frontier' of Keynesian Macroeconomics." *Cambridge Journal of Economics* 30 (4): 541–65.
6. Taylor, Lance. 2008. "A Foxy Hedgehog: Wynne Godley and Macroeconomic Modelling." *Cambridge Journal of Economics* 32: 639–63.
7. Caverzasi, Eugenio, and Antoine Godin. 2014. "Post-Keynesian Stock-Flow-Consistent Modelling: A Survey." *Cambridge Journal of Economics* 39 (1): 157–87.

II) Introduction to National and Financial Accounts

1. Bureau of Economic Analysis. "A Guide to the National Income and Product Accounts of the United States." available online at: [https://www.bea.gov/national/pdf/nipaguid.pdf.chapters 1-4](https://www.bea.gov/national/pdf/nipaguid.pdf.chapters%201-4)
2. Teplin, Albert M. 2001. "The US flow of funds accounts and their uses." *Federal Reserve Bulletin* 87 (2001): 431-441
3. Federal Reserve Board. "Financial Accounts Guide." available online at: <https://www.federalreserve.gov/apps/fof/>
4. United Nations Statistics Division. 2009. *System of National Accounts, 2008*. New York.
5. Bond, Charlotte Anne, Teran Martin, Susan Hume McIntosh, and Charles Ian Mead. 2007. "Integrated macroeconomic accounts for the United States." *Survey of Current Business* 87(11): 14-31.

6. Cagetti, Marco, Elizabeth Ball Holmquist, Lisa Lynn, Susan Hume McIntosh, and David Wasshausen. 2014. "The integrated macroeconomic accounts of the United States." In *Measuring Economic Sustainability and Progress*, pp. 277-321. Chicago: University of Chicago Press.
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6.4 Annex 4: Module 2 Evaluation questionnaires

MAJIG

Training Program - Module 2

Theoretical SFC models and data requirement

Professor Michalis Nikiforos from University of Pavia (Italy).

TRAINING EVALUATION

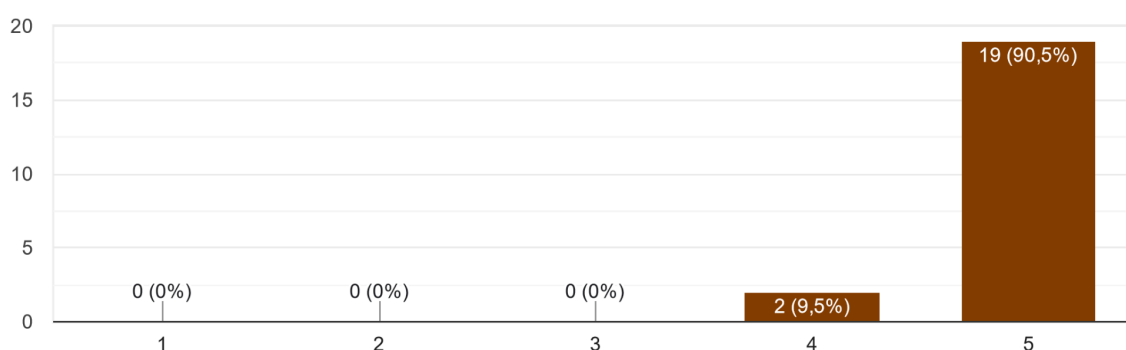
Thank you for having participated in the second module of the MAJIG training programs - Theoretical SFC models and data requirement - provided by Professor Michalis Nikiforos from University of Pavia (Italy).

Please complete the following evaluation form providing your feedback on the module 2.

A. Module objectives

1. The module's learning goals were clearly stated

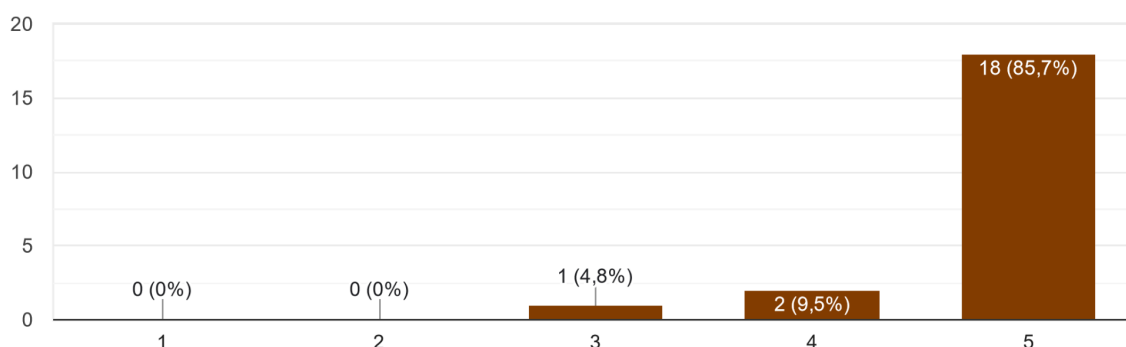
21 response



Average Rating = 4.9

2. The module covered the topics I expected

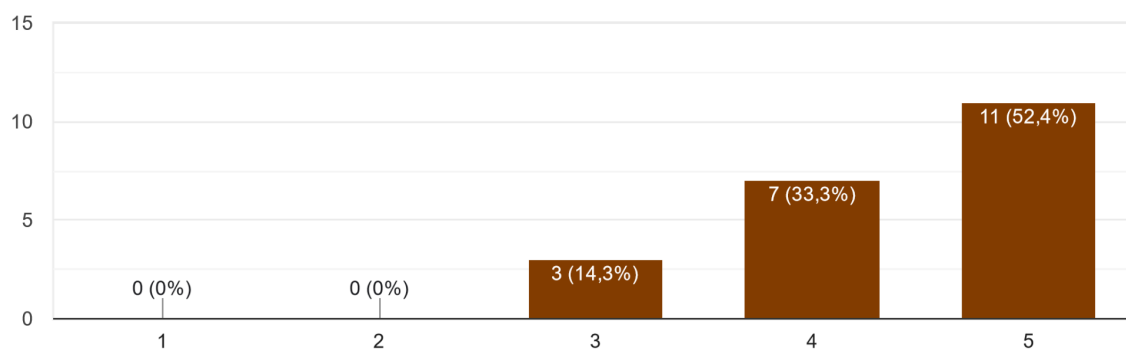
21 response



Average Rating = 4.8

3. The time allocated to each topic was good

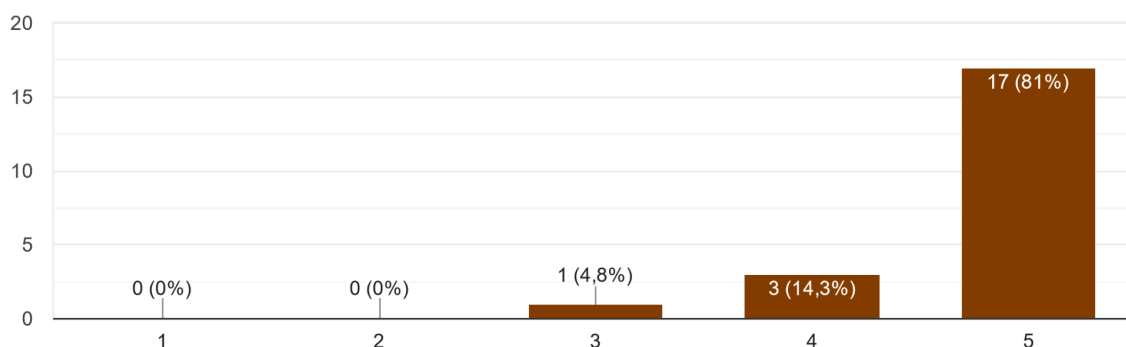
21 response



Average Rating = 4.4

4. All the contents in the module were successfully covered

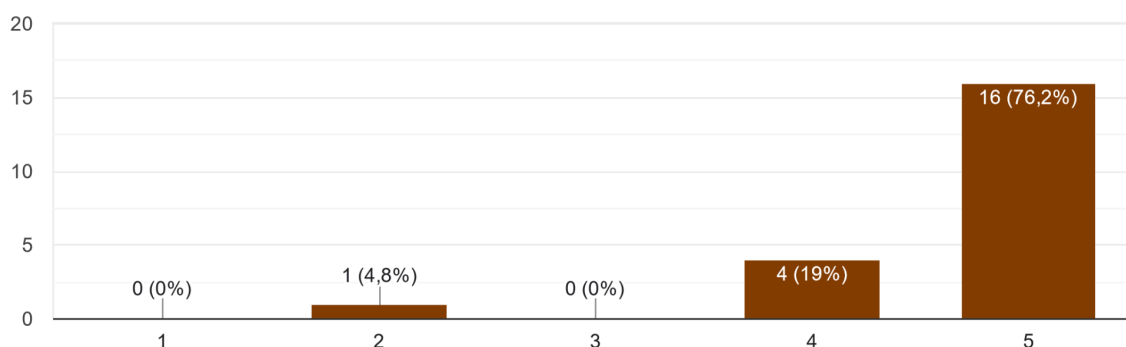
21 response



Average Rating = 4.8

5. There was a good balance between theoretical and practical activities (if applicable)

21 response



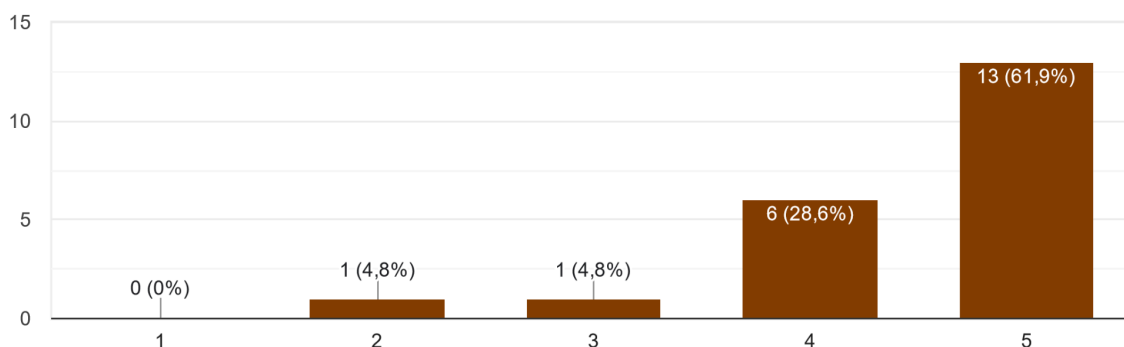
Average Rating = 4.7

“A Section” Average Rating = 4.7

B. Module presentation

1. The course structure was easy to understand and follow

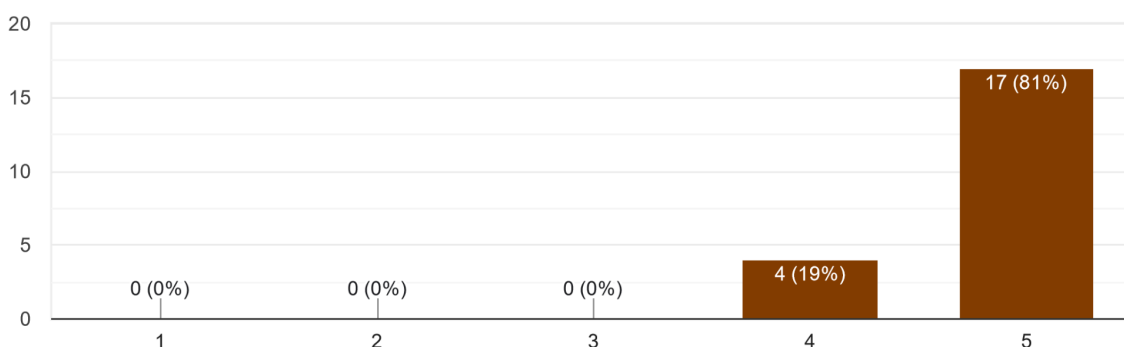
21 risposte



Average Rating = 4.5

2. The topics were presented in logical order

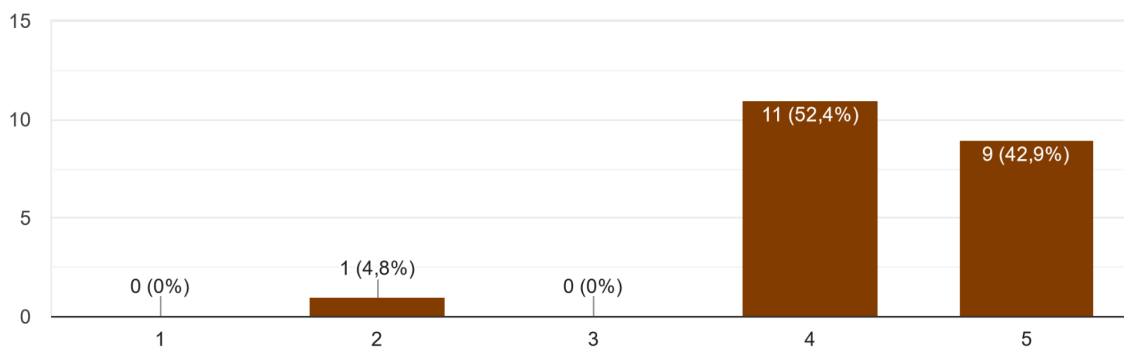
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Average Rating = 4.8

3. I had enough time in class to practice the skills learned in the module

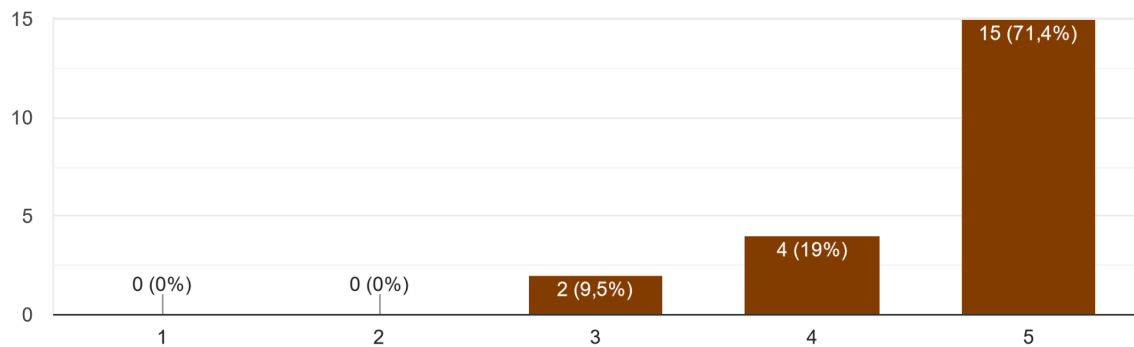
21 risposte



Average Rating = 4.3

4. All the required material was available in due time

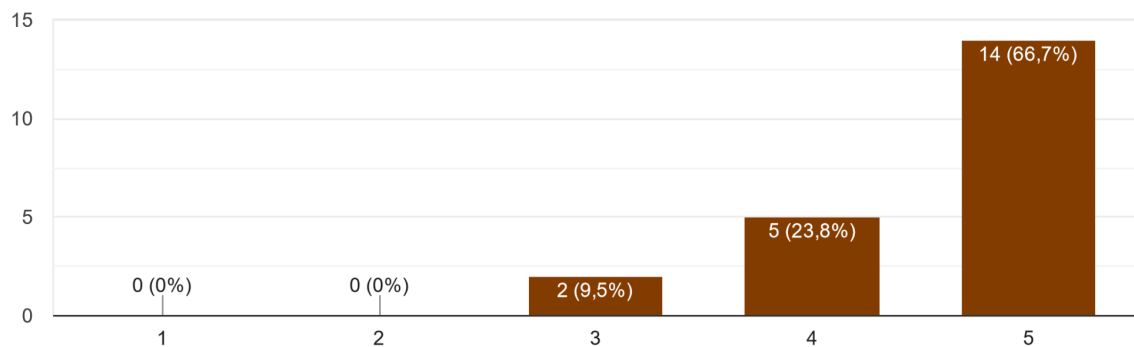
21 risposte



Average Rating = 4.6

5. All the practical matters required for the course worked well (WiFi, IT, etc.)

21 risposte



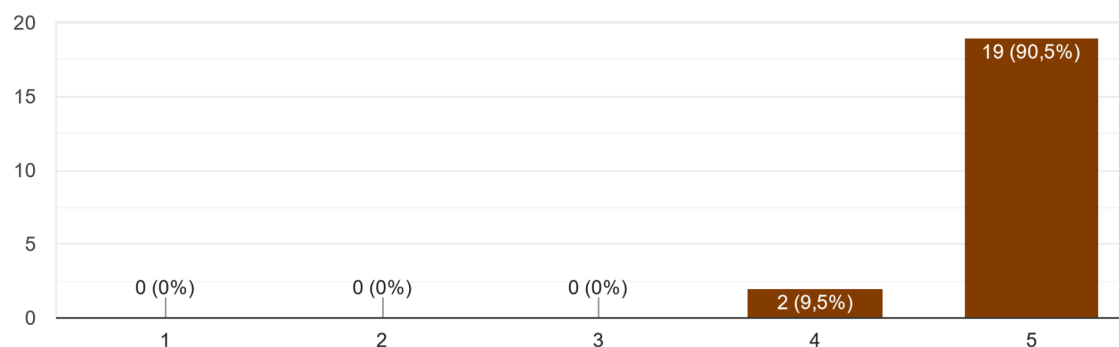
Average Rating = 4.6

“B Section” Average Rating = 4.6

C. Instructor

1. The instructor was well prepared

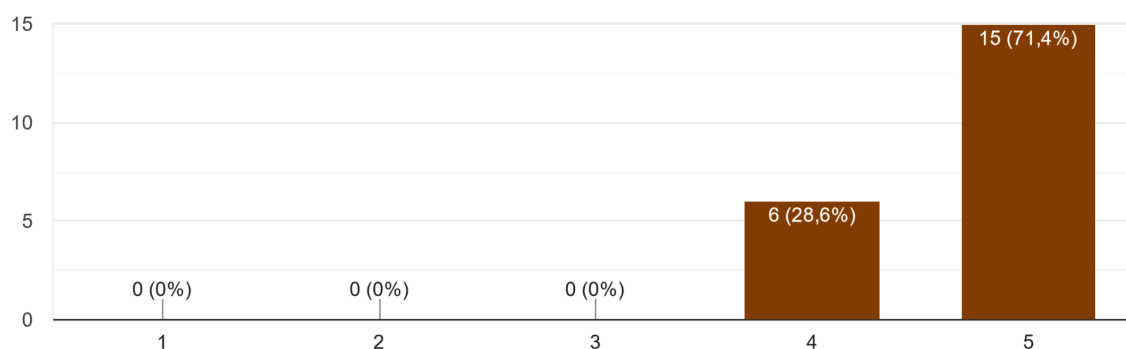
21 risposte



Average Rating = 4.9

2. The instructor communicated the contents clearly

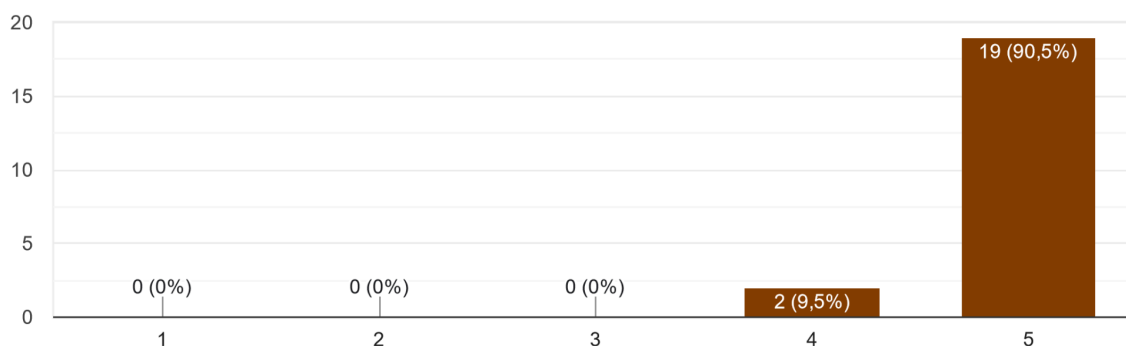
21 risposte



Average Rating = 4.7

3. The instructor was able to answer questions and clear my doubts

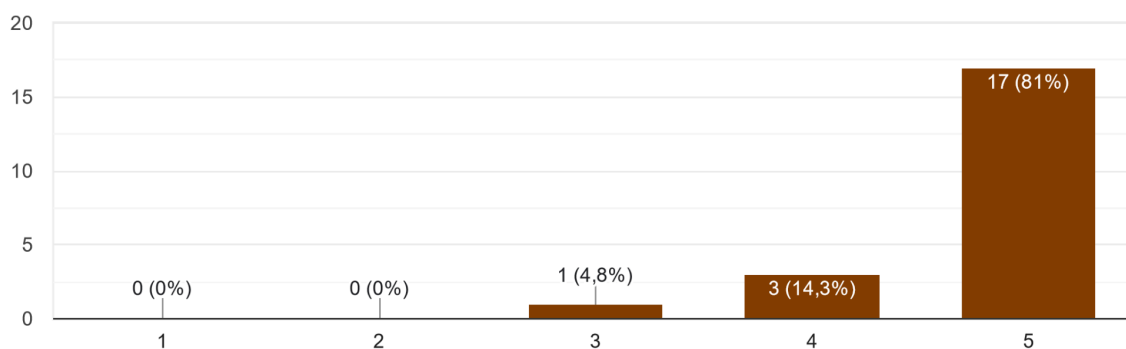
21 risposte



Average Rating = 4.9

4. I received enough feedback on the practical activities of the module (if applicable)

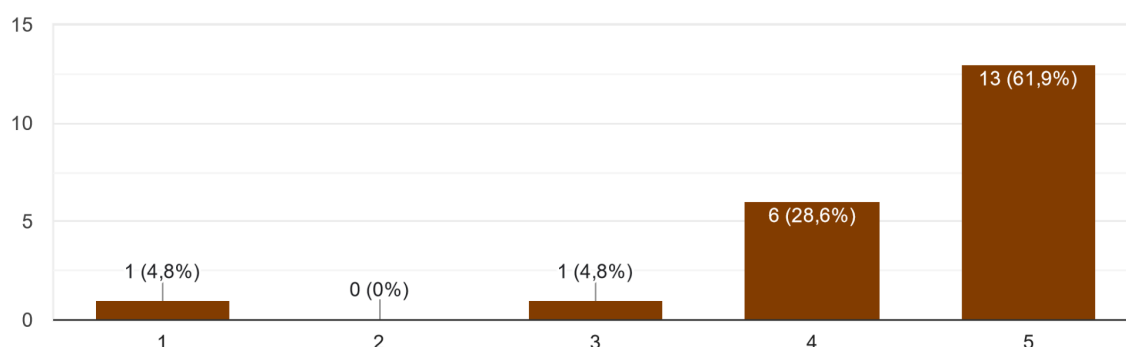
21 response



Average Rating = 4.8

5. Prior to the start of the module I received all the required material and information

21 response



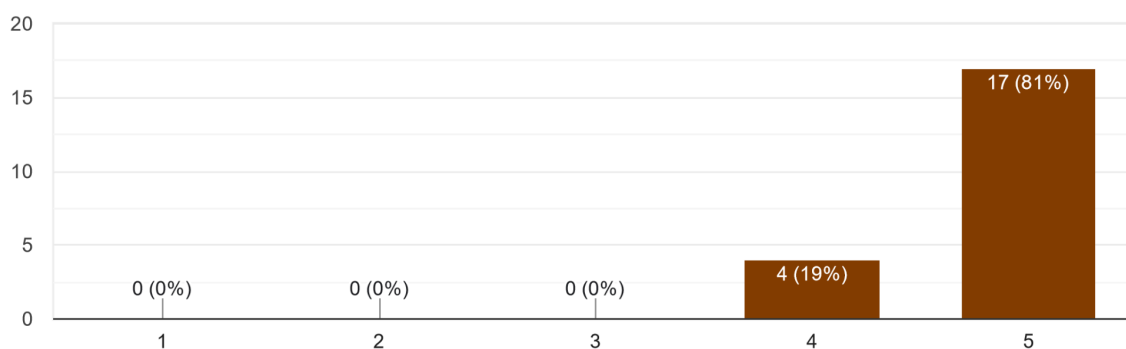
Average Rating = 4.4

“C Section” Average Rating = 4.7

D. Overall Impression

1. The module was worth the time I invested

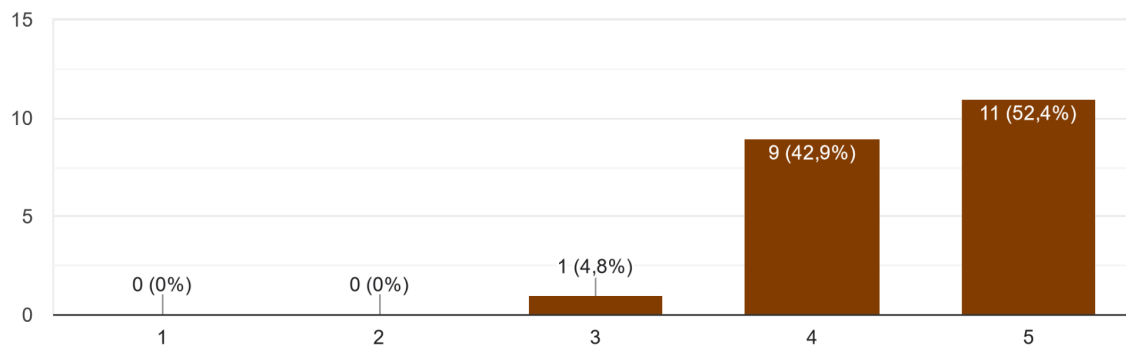
21 response



Average Rating = 4.8

2. With my prior knowledge I was well prepared to follow the contents of the module

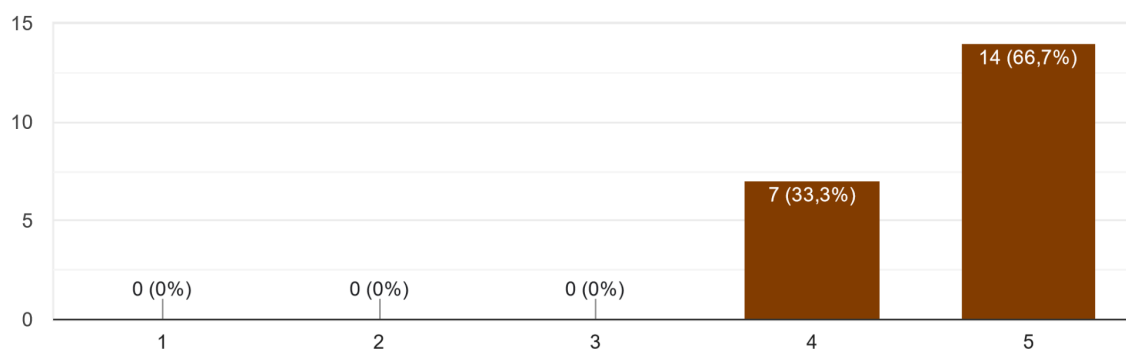
21 response



Average Rating = 4.5

3. I acquired a good understanding of the topics learned in the module

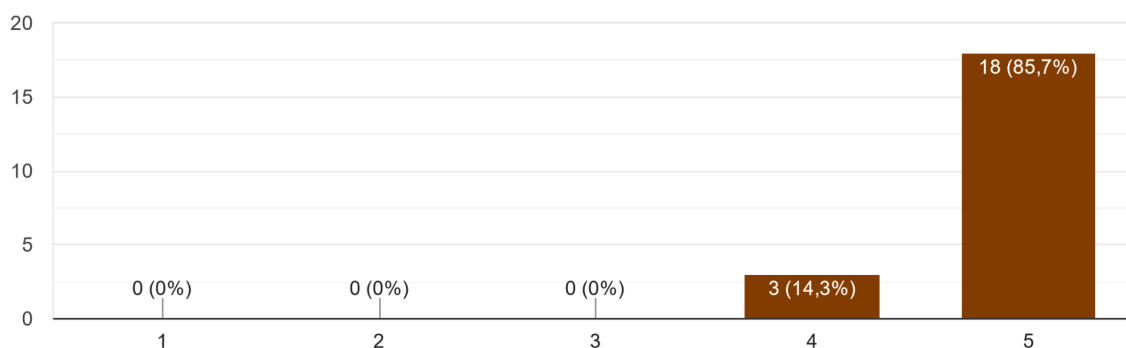
21 response



Average Rating = 4.7

4. The contents and skills learned in the module will be useful in my future work

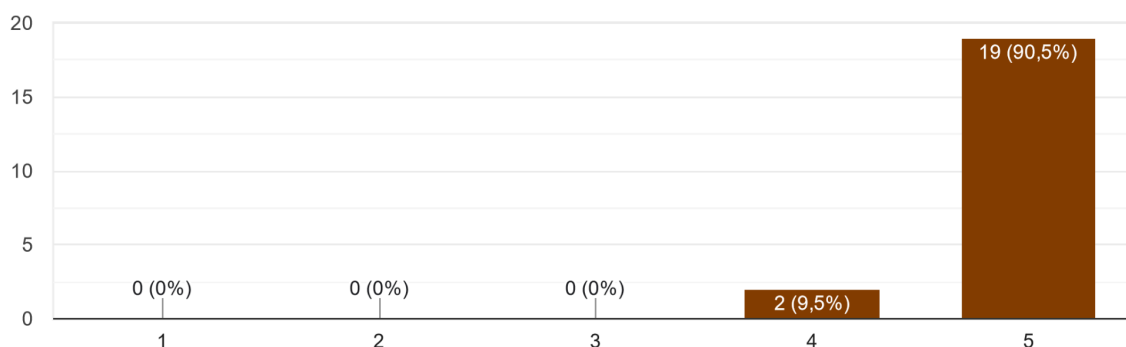
21 response



Average Rating = 4.9

5. I would recommend this course to other researchers working on my field

21 response



Average Rating = 4.9

“D Section” Average Rating = 4.7

“Module 2” Average Rating = 4.7

Please, tell us about any aspects you appreciated of the module.

- I appreciate that in this module was very good the way we introduce to SFC
- I appreciated the applicability of the SFC models for the analysis and implementation of different types of economic policy
- very good
- The theoretical and practice contents was very interesting and useful
- Critical discussion, analytical thinking and the ability to apply learned concepts to real-world situations.
- An outstanding aspect of the course is how up-to-date Professor Nikiforos is in different topics of macroeconomic theory, as well as in the empirical aspects that occur in different parts of the world. Beyond that, the analytical and reflective capacity that he contributed during all classes was quite clarifying.
- course topics
- Me gustó mucho la motivación a razonar cómo funcionan los modelos y la secuencia lógica y clara.
- The professor has a very clear understanding of the topics. He helps us with our questions in a very nice way and ensures, with a final Work and exposition, that we manage the topics of the course.
- The order of the teacher expositions, and the teacher's feedback over students SFC models expositions.
- The module was very interesting and being able to model and make models in this case of consumption

Please, tell us what could be improved for the next time.

- The materials and information of the module have to be compacted before the beginning

- I think, all were ok
- Course in Spanish
- We need more time in each topic, because their complexity is increasing
- Allow more time between the previous module and this one, in order to make better use of the instructor's vast experience, and to better prepare for his classes.
- The only aspect to improve will be that the materials are available at least two days before in order to review them.
- Send the material more in advance to prepare and obtain greater learning
- that is done in Spanish
- El curso se hubiese aprovechado mejor, si hubiésemos tenido un lapso de tiempo mayor entre la finalización del módulo anterior, la recepción de material y el inicio del nuevo módulo.
- Maybe searching for a way to make the classes less large and give the mind some time to recover after a session.
- In my opinion, this course could be improved in the theoretical basis of Portfolio Choice Theory, particularly with students that don't have experience with developed international financial systems.
- so far everything is very good

6.5 Annex 5: Module 3 Syllabus

MAJIG - 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 make “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

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
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

Web resources

A course on empirical stock-flow models:

- Slides and code: <https://gennaro.zezza.it/models/esfc/>
- [Video recordings](#)

References

Enders, W. [Applied Econometric Time Series](#), 4th ed., Wiley.

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

Slides will be provided at the end of classes

6.6 Annex 6: Module 3 Evaluation questionnaires

MAJIG

Training Programme - Module 3

Applied SFC Modelling

**Professor Gennaro Zezza - University of Cassino and Southern Lazio
(UNICLAM)**

TRAINING EVALUATION

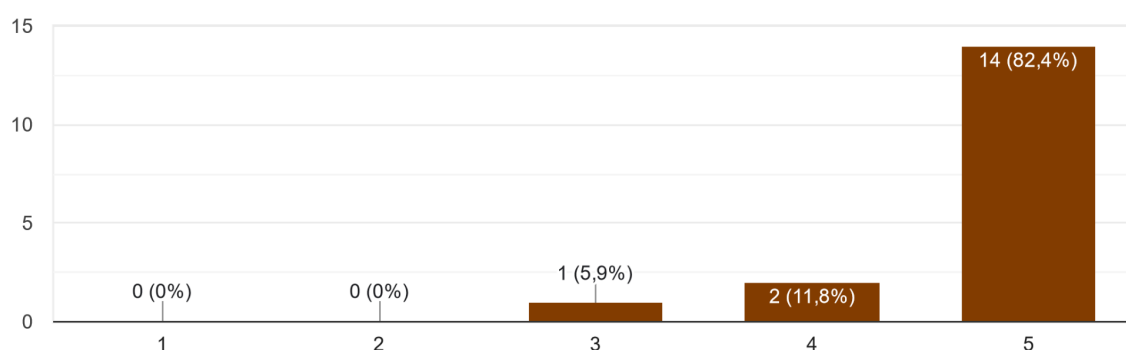
Thank you for having participated in the third module of the MAJIG training programmes - Applied SFC Modelling - provided by Professor Gennaro Zezza from University of Cassino and Lazio Meridionale (Italy).

Please complete the following evaluation form providing your feedback on module 3.

A. Module objectives

1. The module's learning goals were clearly stated

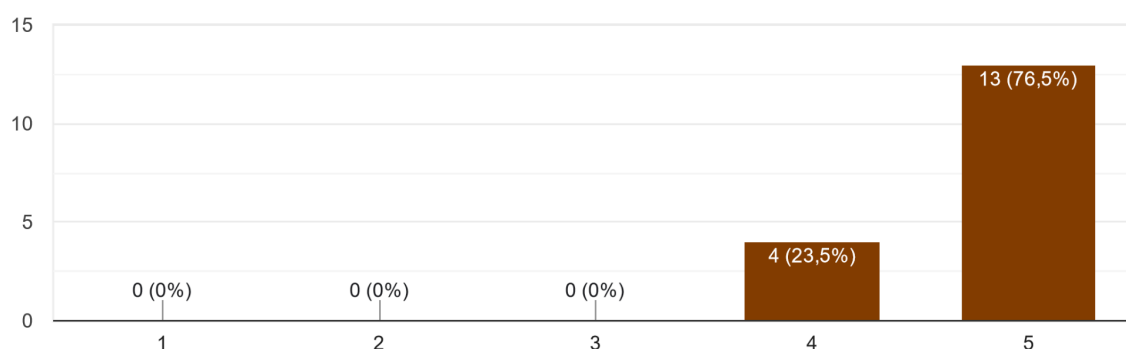
17 risposte



Average Rating = 4.7

2. The module covered the topics I expected

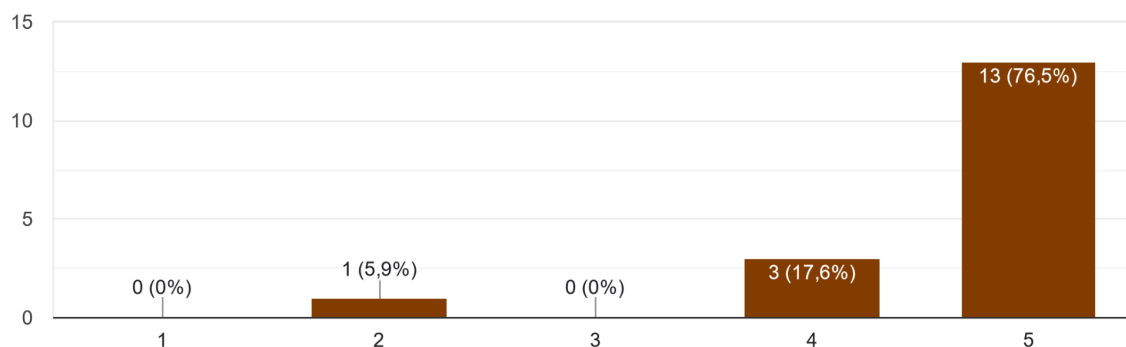
17 risposte



Average Rating = 4.8

3. The time allocated to each topic was good

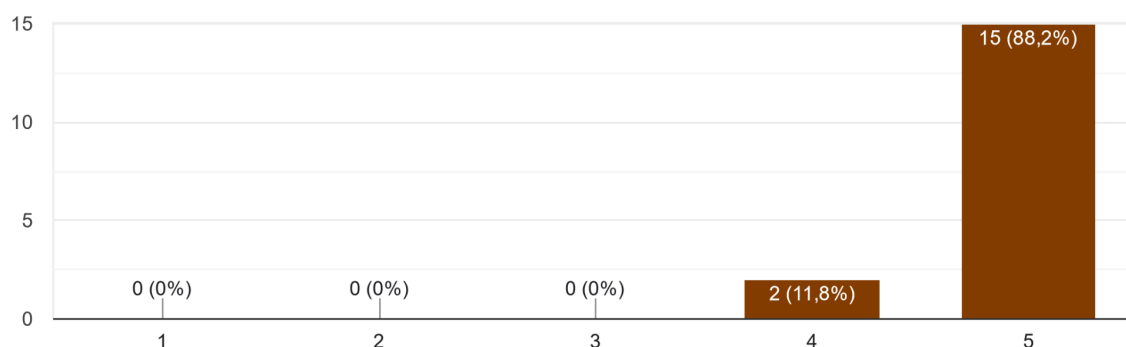
17 risposte



Average Rating = 4.5

4. All the contents in the module were successfully covered

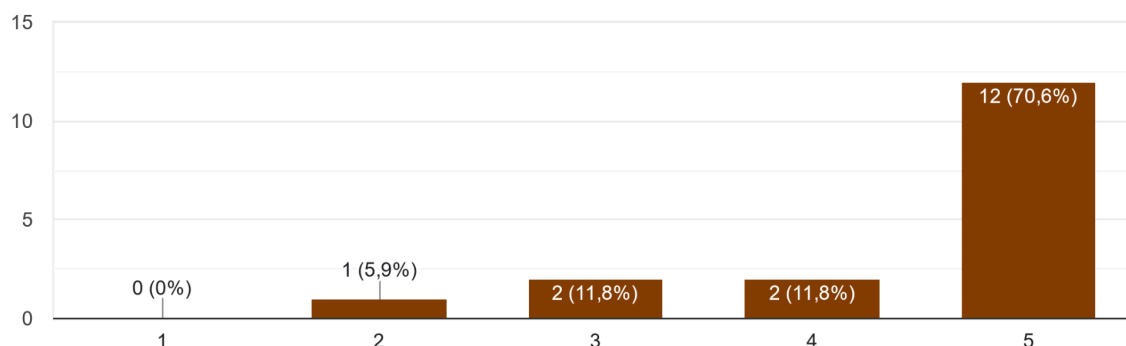
17 risposte



Average Rating = 4.9

5. There was a good balance between theoretical and practical activities (if applicable)

17 risposte



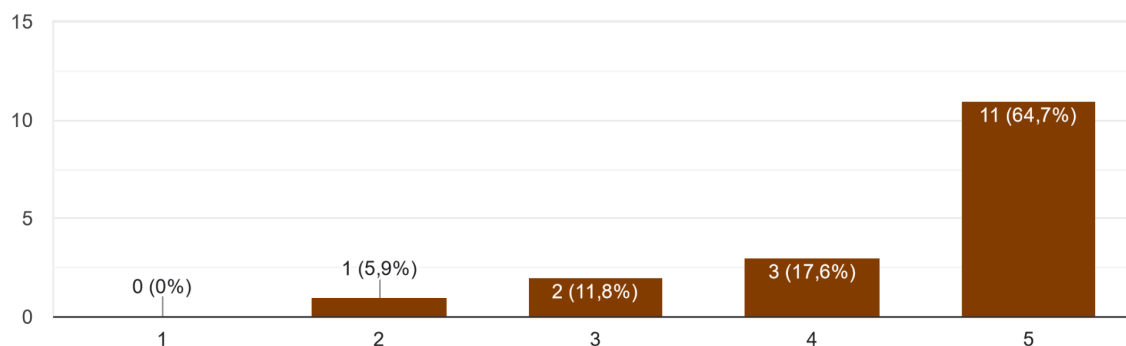
Average Rating = 4.5

“A Section” Average Rating = 4.7

B. Module presentation

1. The course structure was easy to understand and follow

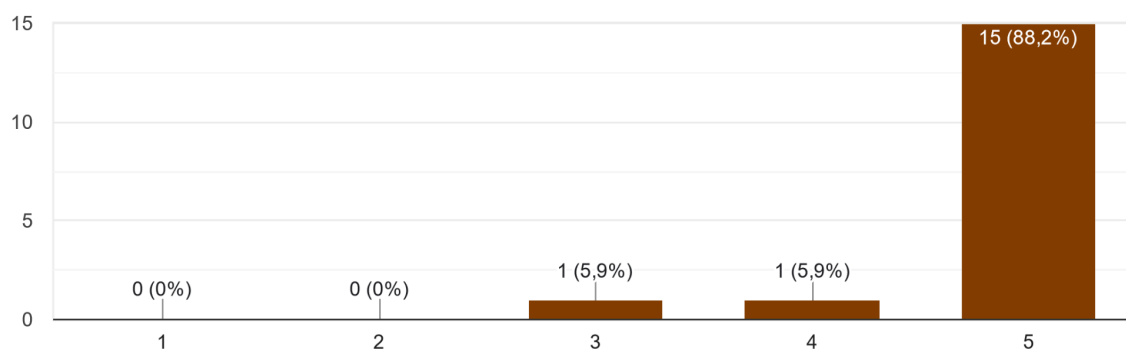
17 risposte



Average Rating = 4.4

2. The topics were presented in logical order

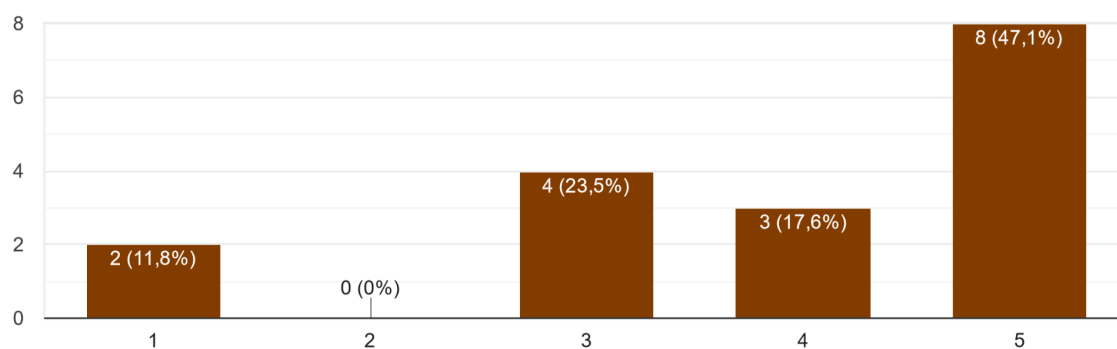
17 risposte



Average Rating = 4.8

3. I had enough time in class to practice the skills learned in the module

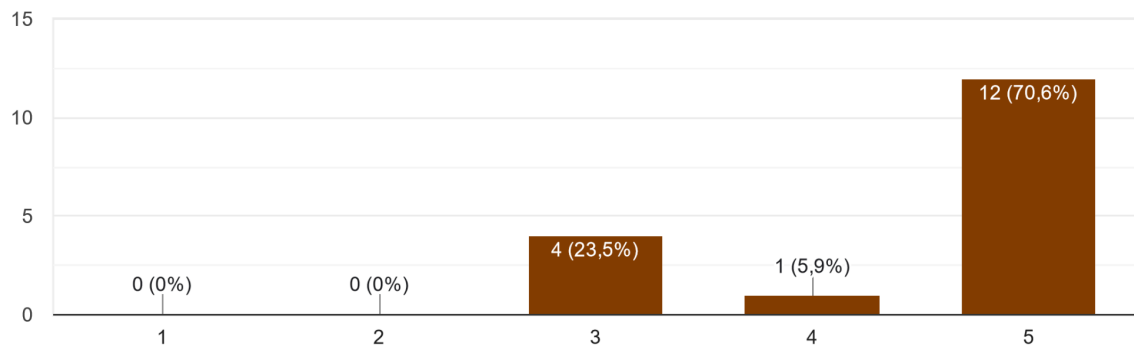
17 risposte



Average Rating = 3.9

4. All the required material was available in due time

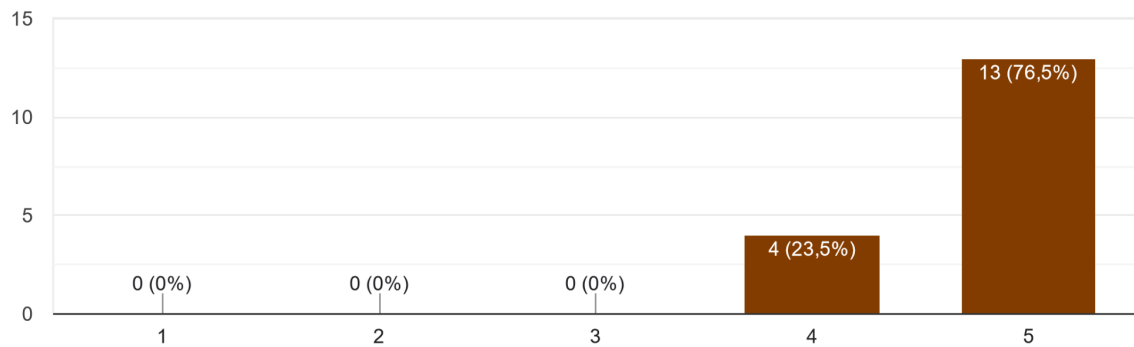
17 risposte



Average Rating = 4.5

5. All the practical matters required for the course worked well (WiFi, IT, etc.)

17 risposte



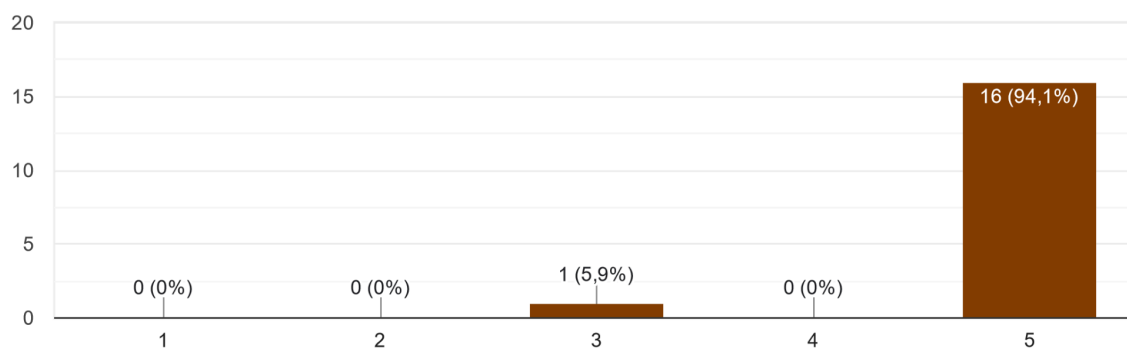
Average Rating = 4.8

“B Section” Average Rating = 4.5

C. Instructor

1. The instructor was well prepared

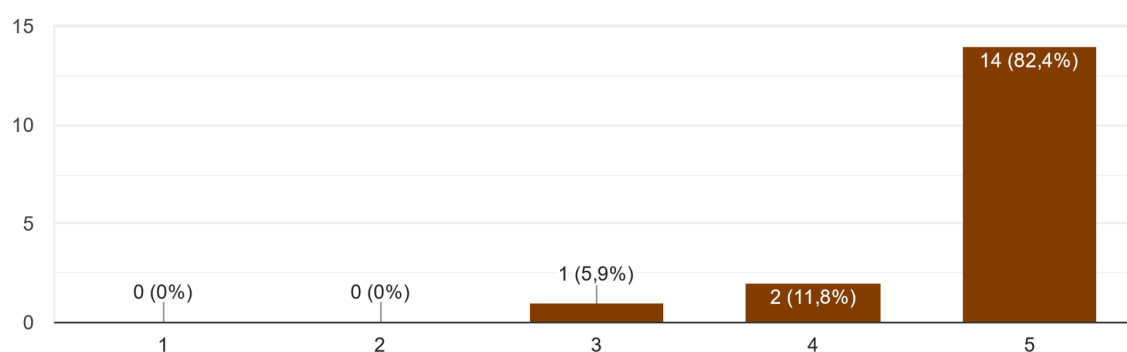
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Average Rating = 4.9

2. The instructor communicated the contents clearly

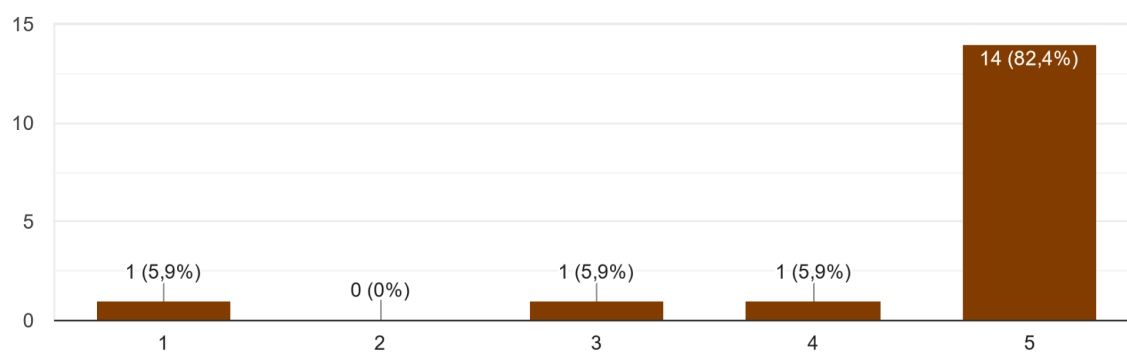
17 risposte



Average Rating = 4.8

3. The instructor was able to answer questions and clear my doubts

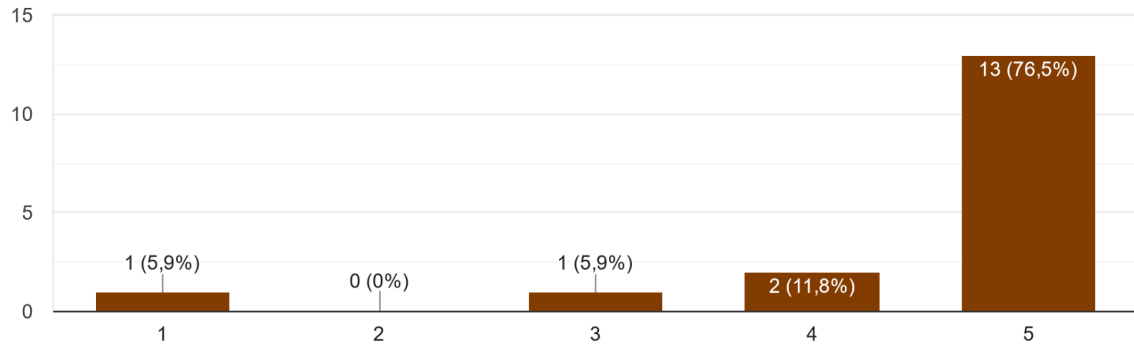
17 risposte



Average Rating = 4.6

4. I received enough feedback on the practical activities of the module (if applicable)

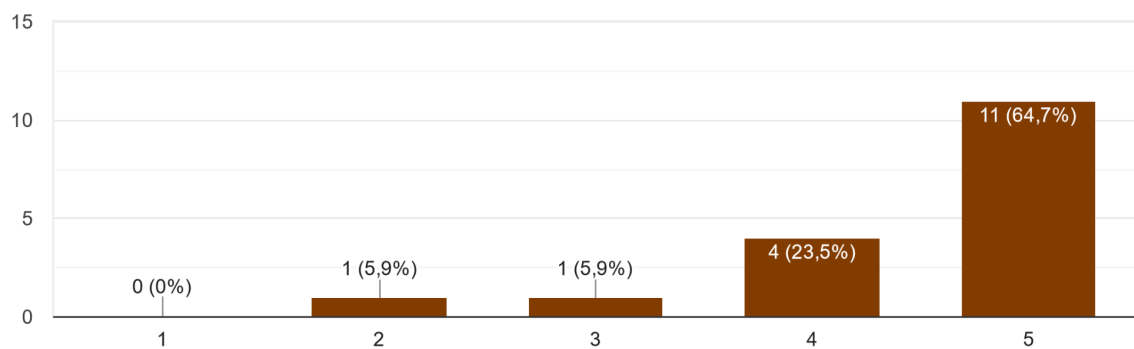
17 risposte



Average Rating = 4.5

5. Prior to the start of the module I received all the required material and information

17 risposte



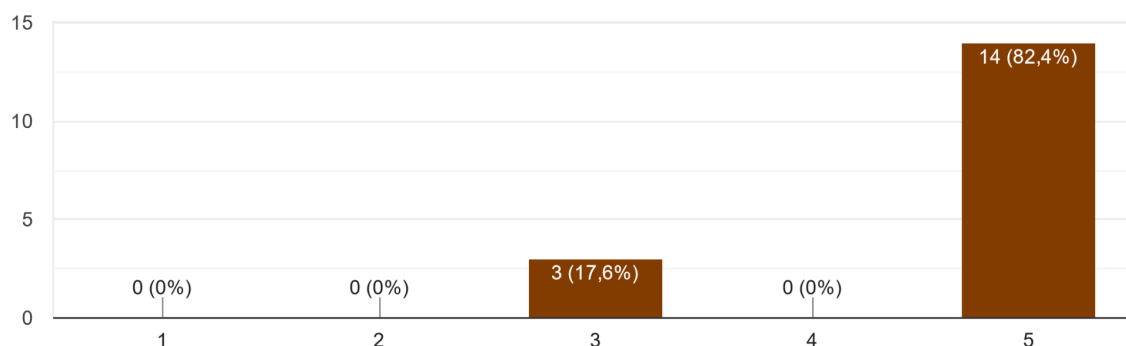
Average Rating = 4.5

“C Section” Average Rating = 4.6

D. Overall Impression

1. The module was worth the time I invested

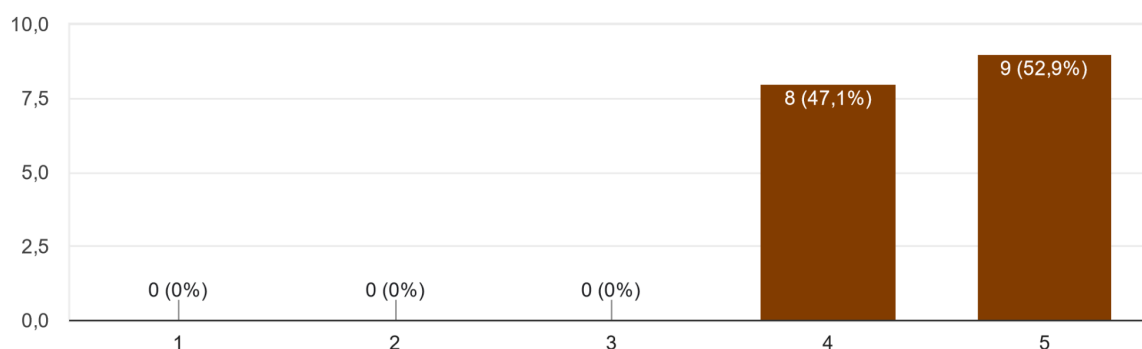
17 risposte



Average Rating = 4.6

2. With my prior knowledge I was well prepared to follow the contents of the module

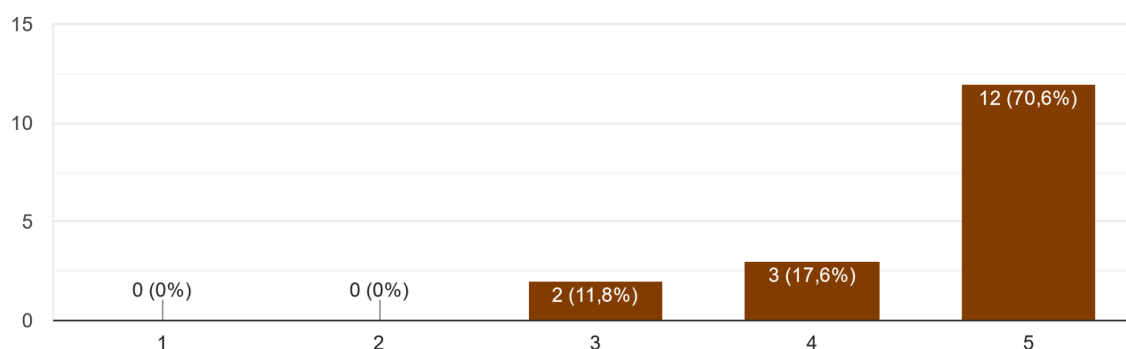
17 risposte



Average Rating = 4.5

3. I acquired a good understanding of the topics learned in the module

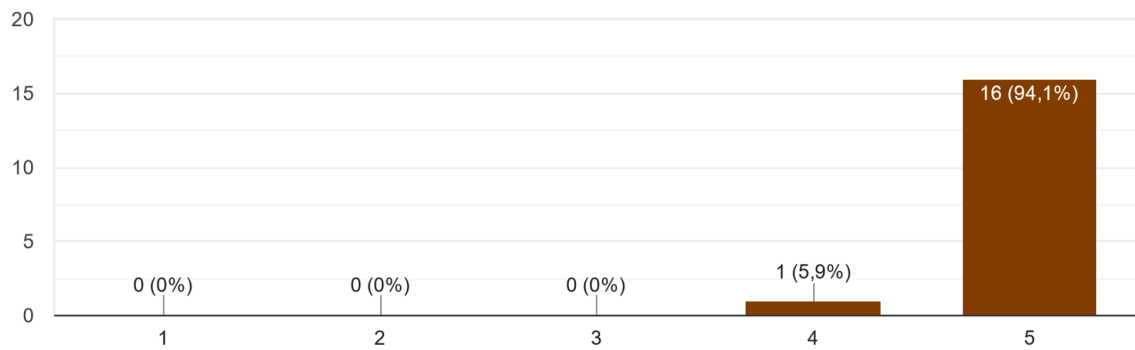
17 risposte



Average Rating = 4.6

4. The contents and skills learned in the module will be useful in my future work

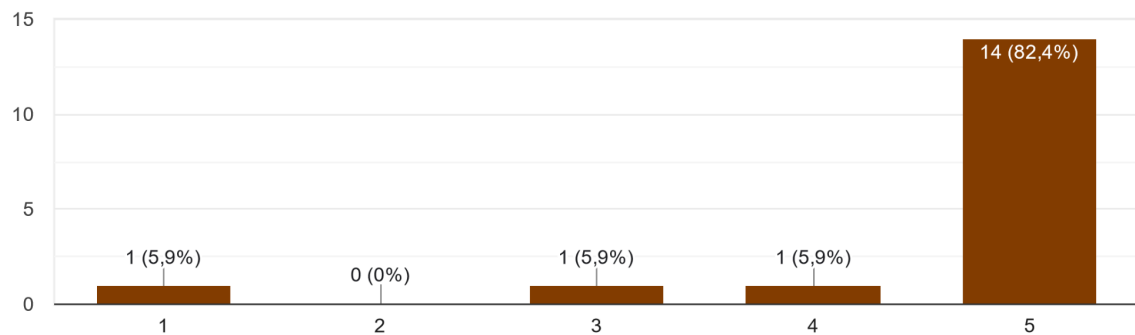
17 response



Average Rating = 4.9

5. I would recommend this course to other researchers working on my field

17 response



Average Rating = 4.6

“D Section” Average Rating = 4.7

“Module 3” Average Rating = 4.6

Please, tell us about any aspects you appreciated of the module.

- The professor had excellent command of the subject matter.
- El profesor tiene mucha experiencia y generó una muy grata impresión por su capacidad de resolver los problemas. Especialmente la falta de datos. Definitivamente un gran referente en el tema.
- The model and the way of using the data, as well as the way of covering the missing information, which in Bolivia is the most complicated topic for research, have been extremely important in this module, the fact that it was done live has been very enriching. It has been a privilege to be able to count on the teachers we have had until now.
- I think that the expertise, knowledge and abilities of the instructor were excellent; we are very grateful with him
- Really, grateful for the opportunity to learn more about post-Keynesian models. Professor Gennaro Zezza's expertise is surprising, the way he taught and built the SFC matrices for the Bolivian case has been surprising. The patience and dedication to overcome each obstacle in Bolivia showed us the way to replicate his exercises. This course, like the rest, is highly valuable. I consider that we acquired, as long as we practice, skills that will help us in our group research.
- It was very nice.
- Ask Professor Genaro to upload all the code, plus the presentation he created.
- Prof Zezza availability to answer all doubts

Please, tell us what could be improved for the next time.

- That the course be taught in Spanish.
- Casi nada. Probablemente el poder contar con material de estudio con mayor antelación.
- The theoretical themes from which they are based, categories and concepts used should be reviewed more, it is the most important issue, because these must be contrasted with orthodox theory. For this it is necessary to give more time to each course.
- On a next occasion, perhaps it would be appropriate for the lecturer to tell us what data is necessary for modeling, in order to help and be faster when assisting with the requirements.
- Information and material available prior to the lectures. If sessions are recorded, inform participants to access the session.

6.7 Annex 7: Module 4 Syllabus

Environmental Stock-Flow Consistent Input-Output Models

Sebastian Valdecantos

This course consists of the last module of MAJIG. It will be delivered in May 2024 in Bogotá (Colombia) and 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 consolidating 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 models capable of addressing relevant policy questions.
- Use data to feed theoretical models as a starting point to build a partial or fully-fledged empirical stock-flow consistent input-output model.

Skills

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

- Combine sectoral, environmental and macroeconomic variables in an integrated modelling framework.
- Create their own models or modify the ones developed in the course to address various research and policy questions that can benefit from a structuralist approach to macroeconomics.

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 consolidate 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, energy and greenhouse gas emissions).
- 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 (pages 10-21).
- Lecture notes

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 the National Accounting framework typical of SFC models 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 a 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
- Valdecantos, S. (2016). Estructura productiva y vulnerabilidad externa: un modelo estructuralista stock-flujo consistente. Serie Estudios y Perspectivas de la CEPAL. Oficina de Buenos Aires.
- Valdecantos, S. (2024). A Prototype SFC-IO Model for a Small Open Peripheral Economy.
- Godin, A., & Yilmaz, S. D. (2020). Modelling small open developing economies in a financialized world: A stock-flow consistent prototype growth model. AFD Research Papers No 125.

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 SFC-IO models developed in Module 2 to integrate environmental accounts, leading to an Environmental Stock-Flow Consistent Input-Output Model (ESFCIO).

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.
- Using environmental SFC-IO models for economic policy simulation and prospective analysis in the context of the low-carbon transition.

Bibliography:

- Miller and Blair (2009). Input-Output Analysis: Foundations and Extensions. Chapter 10 (pages 447-451).
- Lecture notes

6.8 Annex 8: Module 4 Evaluation questionnaires

MAJIG

Training Programme - Module 4 Environmental Stock-Flow Consistent Input-Output Models Professor Sebastian Valdecantos - Aalborg University

TRAINING EVALUATION

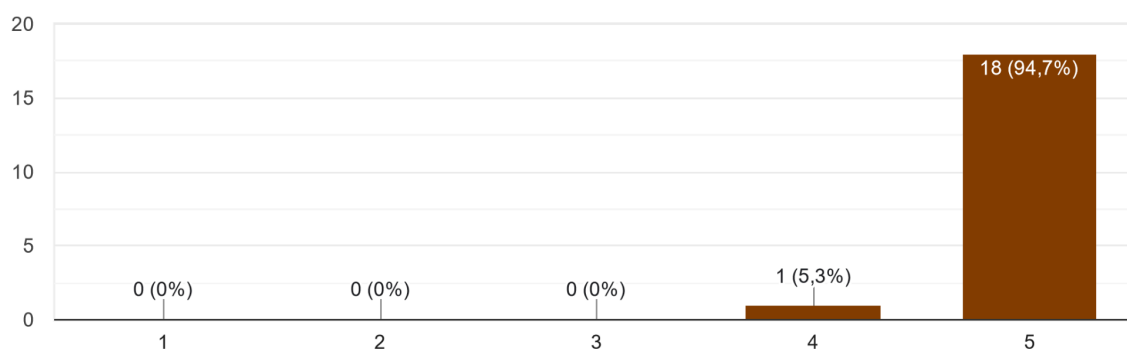
Thank you for having participated in the fourth module of the MAJIG training programmes - Environmental Stock-Flow Consistent Input-Output Models - provided by Professor Sebastian Valdecantos from Aalborg University (Denmark).

Please complete the following evaluation form providing your feedback on the module 4.

A. Module objectives

1. The module's learning goals were clearly stated

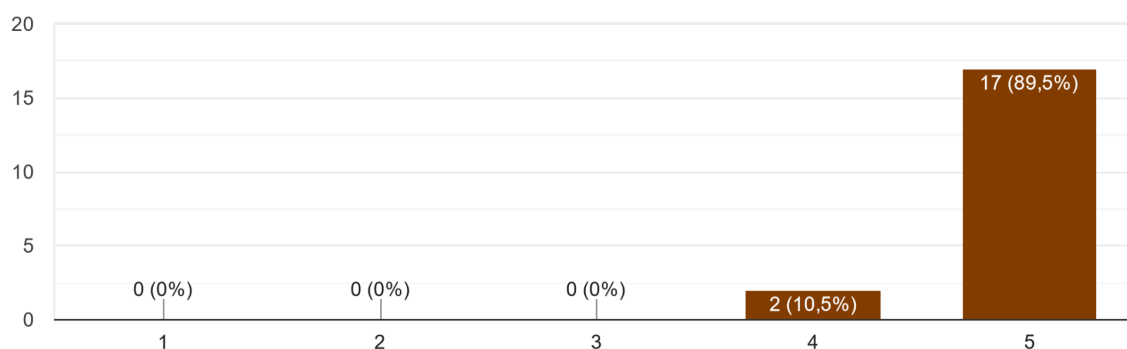
19 risposte



Average Rating = 4.9

2. The module covered the topics I expected

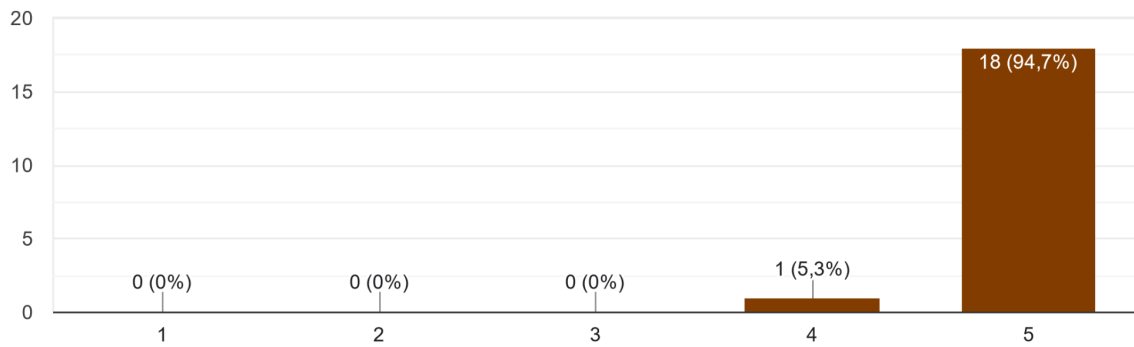
19 risposte



Average Rating = 4.9

3. The time allocated to each topic was good

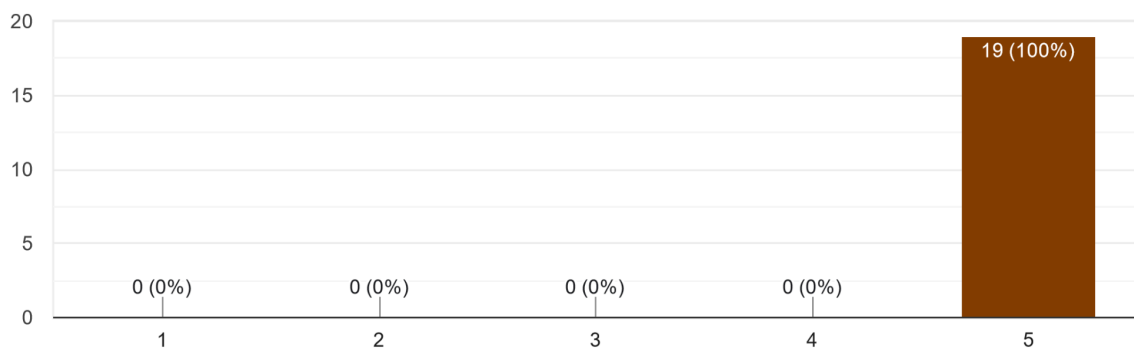
19 risposte



Average Rating = 4.9

4. All the contents in the module were successfully covered

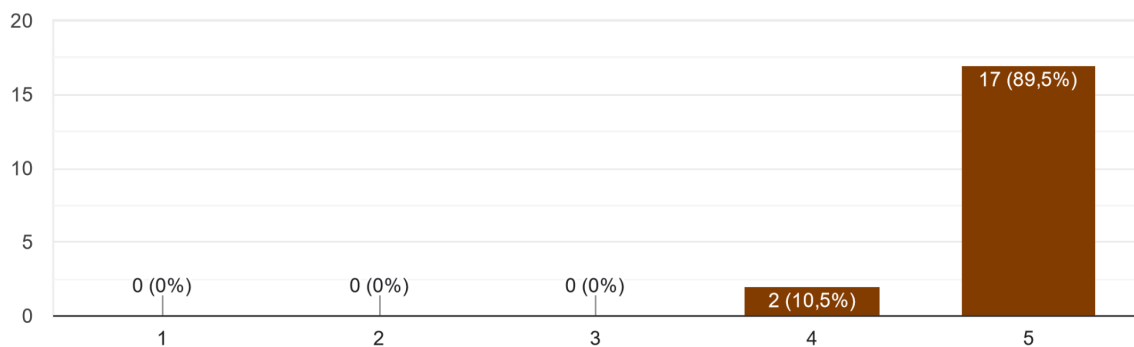
19 risposte



Average Rating = 5.0

5. There was a good balance between theoretical and practical activities (if applicable)

19 risposte



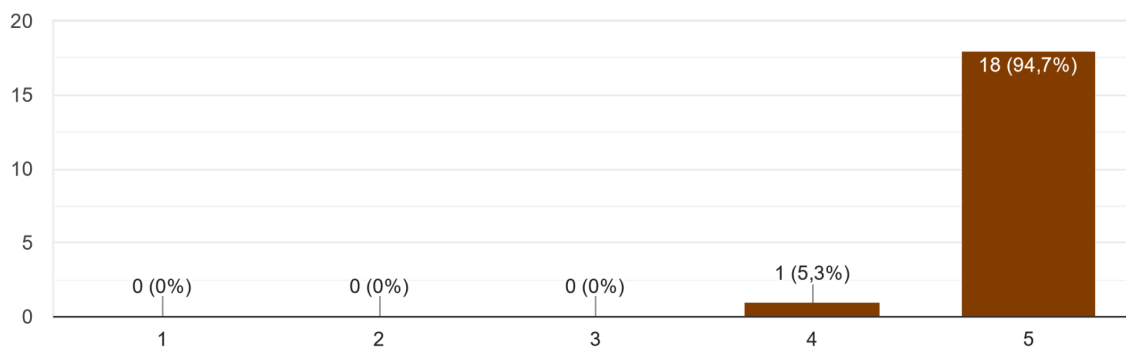
Average Rating = 4.9

“A Section” Average Rating = 4.9

B. Module presentation

1. The course structure was easy to understand and follow

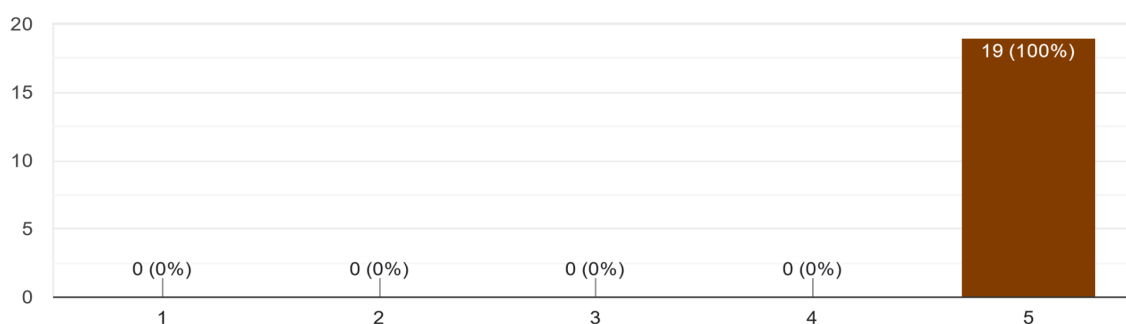
19 risposte



Average Rating = 4.9

2. The topics were presented in logical order

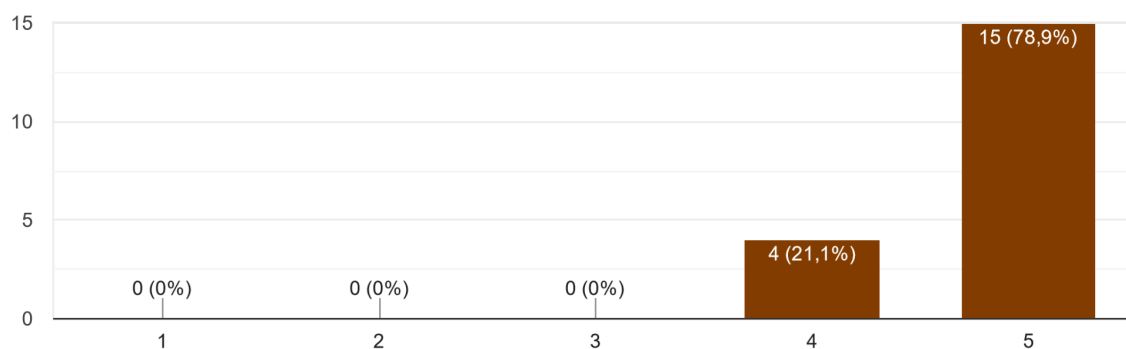
19 risposte



Average Rating = 5.0

3. I had enough time in class to practice the skills learned in the module

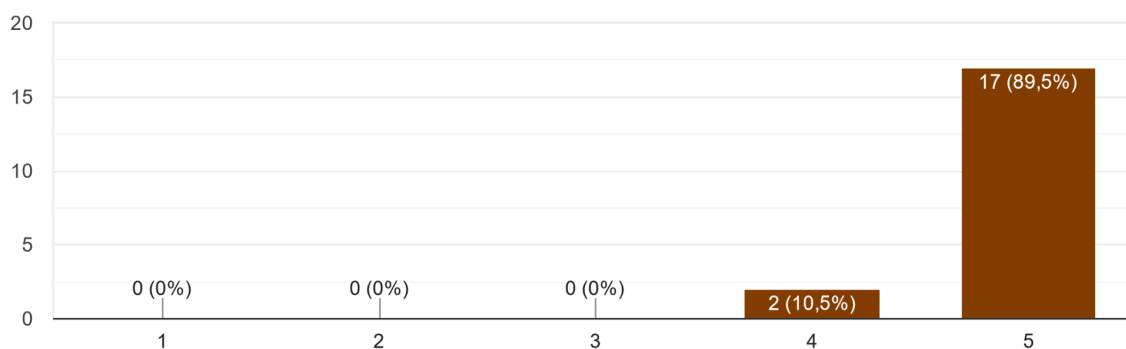
19 risposte



Average Rating = 4.8

4. All the required material was available in due time

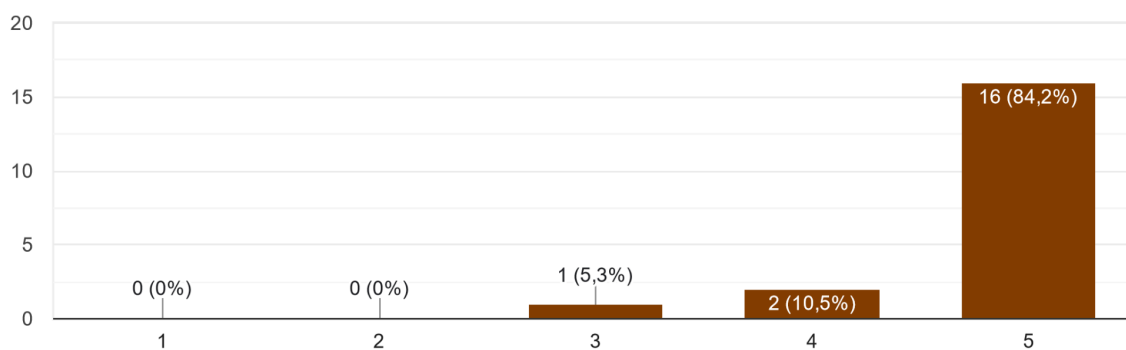
19 risposte



Average Rating = 4.9

5. All the practical matters required for the course worked well (WiFi, IT, etc.)

19 risposte



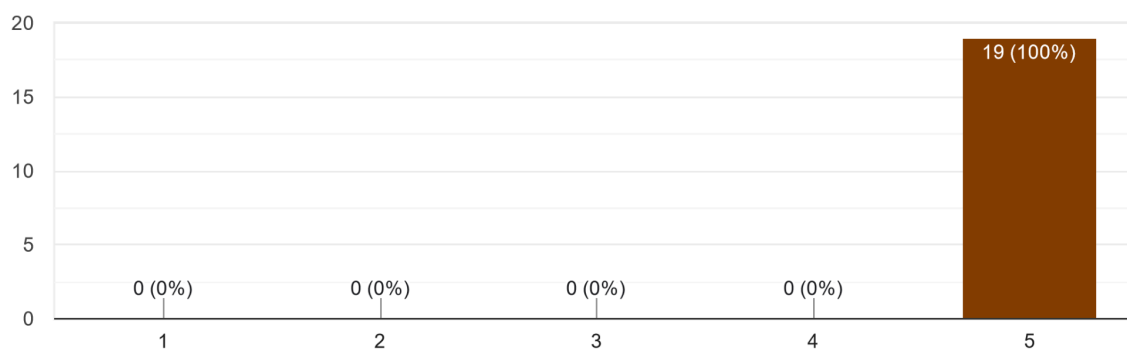
Average Rating = 4.8

“B Section” Average Rating = 4.9

C. Instructor

1. The instructor was well prepared

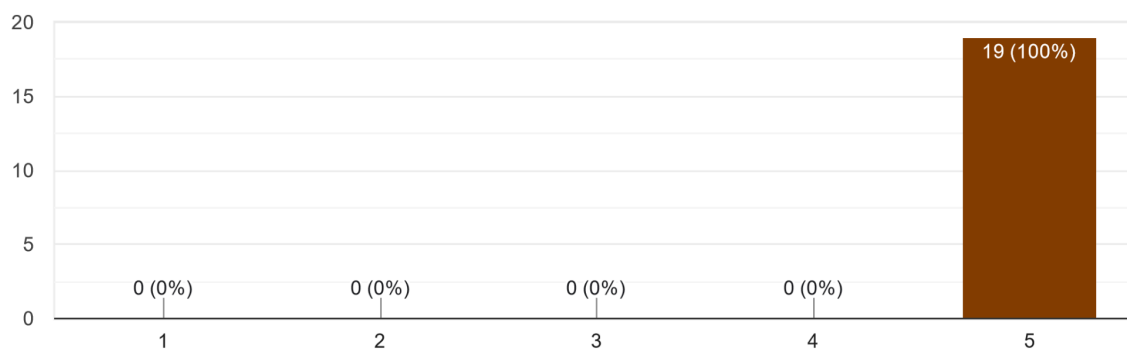
19 response



Average Rating = 5.0

2. The instructor communicated the contents clearly

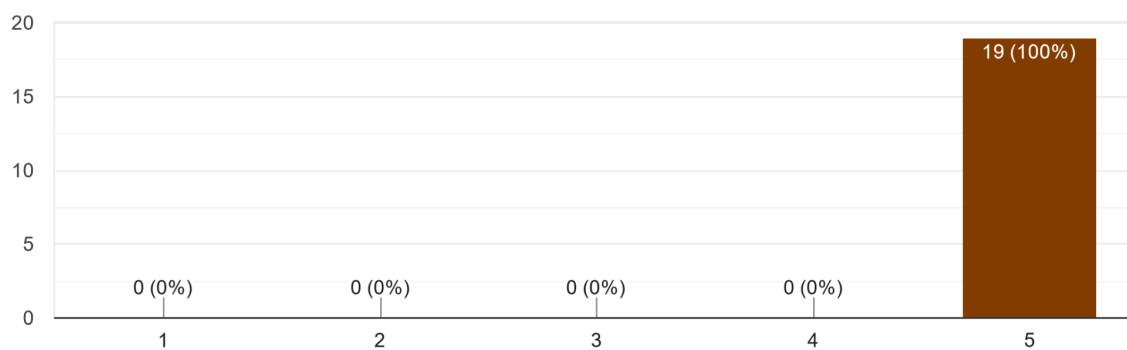
19 response



Average Rating = 5.0

3. The instructor was able to answer questions and clear my doubts

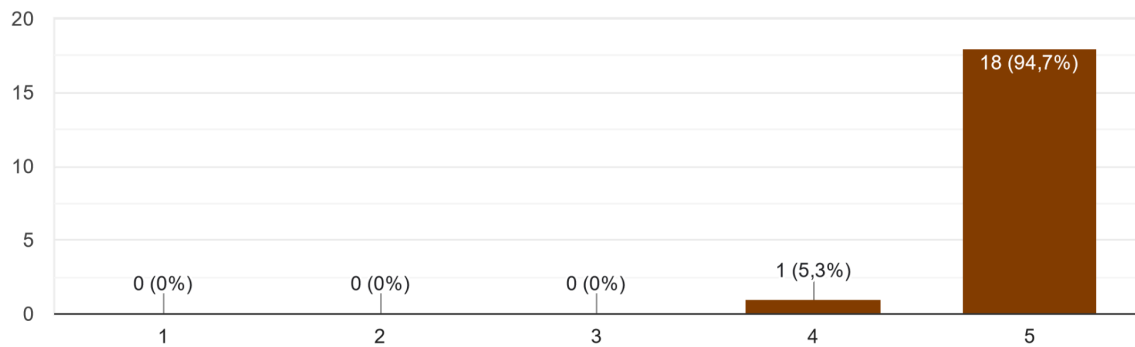
19 response



Average Rating = 5.0

4. I received enough feedback on the practical activities of the module (if applicable)

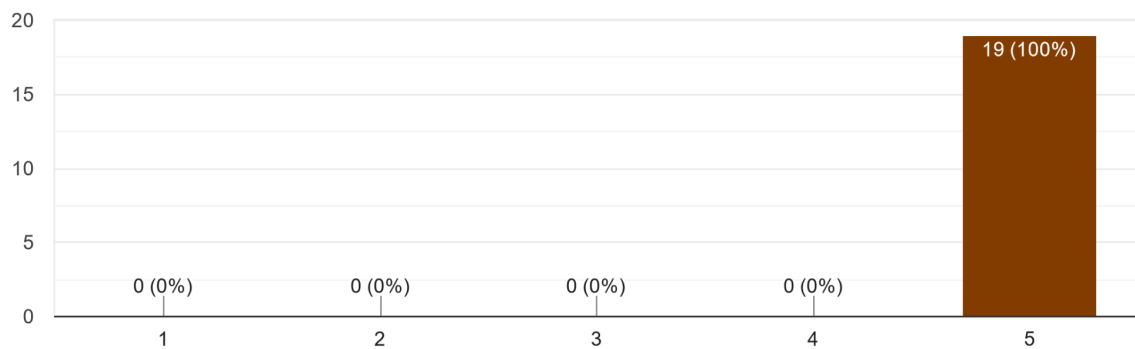
19 risposte



Average Rating = 4.9

5. Prior to the start of the module I received all the required material and information

19 risposte



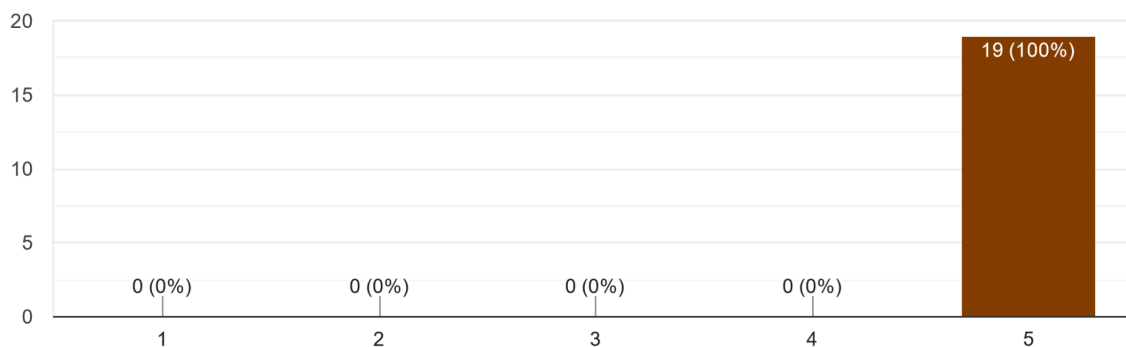
Average Rating = 5.0

“C Section” Average Rating = 5.0

D. Overall Impression

1. The module was worth the time I invested

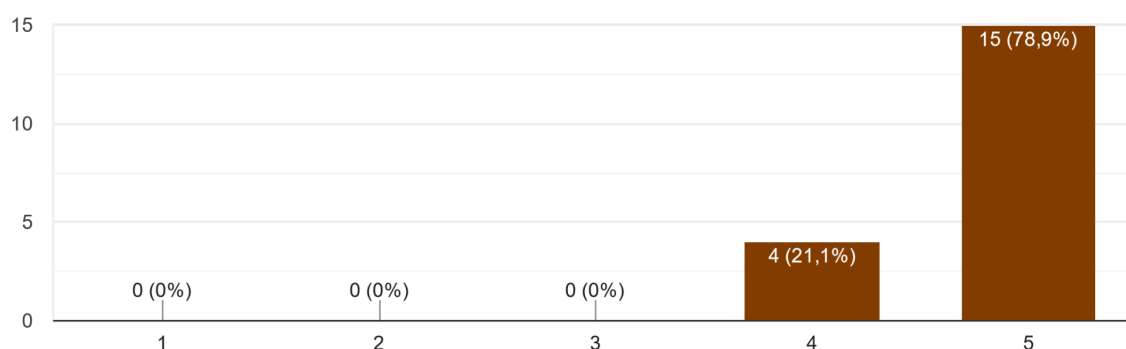
19 risposte



Average Rating = 5.0

2. With my prior knowledge I was well prepared to follow the contents of the module

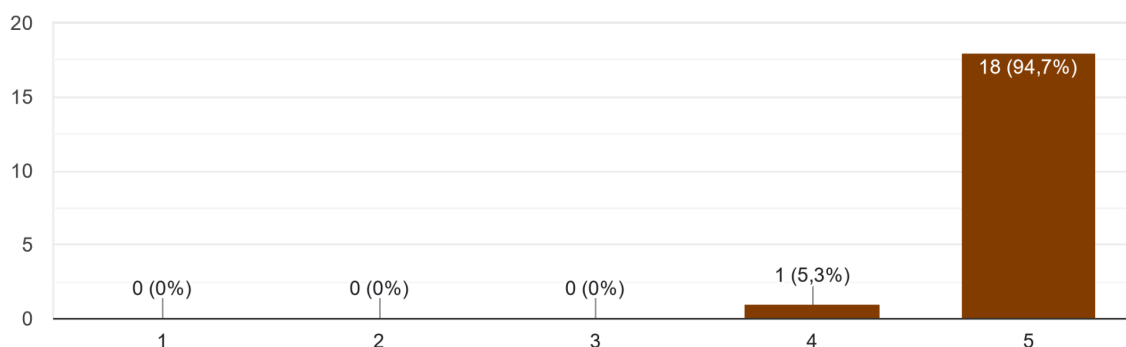
19 risposte



Average Rating = 4.8

3. I acquired a good understanding of the topics learned in the module

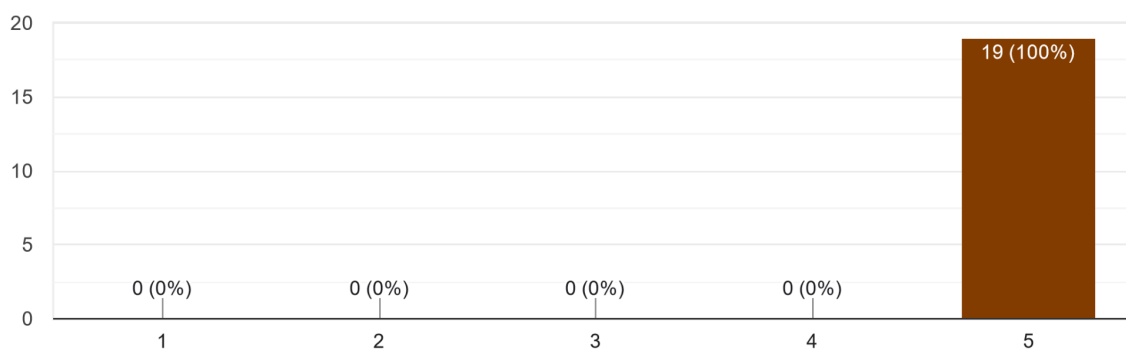
19 risposte



Average Rating = 4.9

4. The contents and skills learned in the module will be useful in my future work

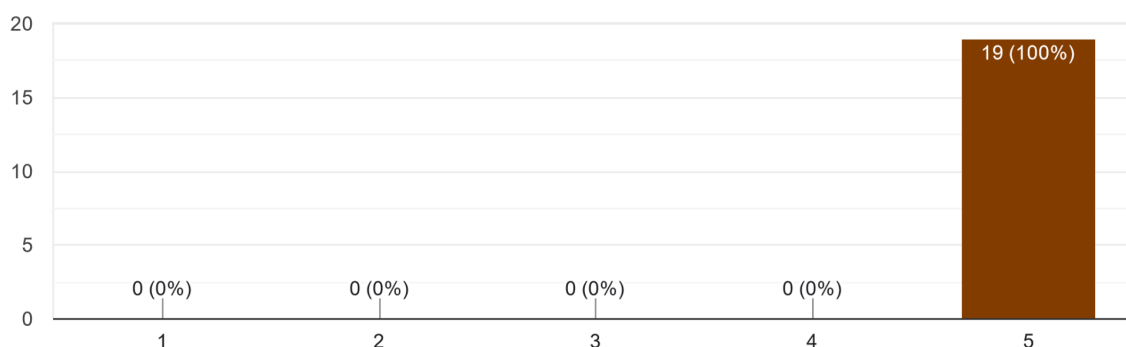
19 risposte



Average Rating = 5.0

5. I would recommend this course to other researchers working on my field

19 risposte



Average Rating = 5.0

“D Section” Average Rating = 4.9

“Module 4” Average Rating = 4.

Please, tell us about any aspects you appreciated of the module.

- Sebastián approach allowed to everyone could learn and apply on a step by step basis
- Excelente exposición.
- The use of the tools in class, I learned a lot.
- The professor's willingness and incentives for us to ask questions, along with his feedback, were spectacular. Additionally, the exercises he assigned were very good for helping us grasp the topics covered.
- I know that the projector has chosen the model regarding the impact on the medium environment, and the ease in which it can be fully explained
- I really appreciate the use of R software and the introduction to use it
- This fourth course closed the previous three in a good way, with an instrument that is more versatile and friendly, to be able to model CFS.
- Professor Valdecantos has an excellent domain of Knowledge of Stock Flow Consistent Models. His expertise combined with his comprehensive teaching makes the course very understandable. Also, the materials and the use of software R to solve the equations of SFC models were easy to use. The Professor put at our disposal a set of useful tools (papers about SFC-IO models and scripts in R) that will help us develop our models for the Bolivian case. Finally, thank Professor Valdecantos, who, like the rest of the Professors, are highly committed people, rigorous in their teaching, brilliant in what they do, and very inspiring.
- None.
- The module was well developed, the professor showed ability in the use of R software in its application for input-output matrices and the Stock Flow Consistent model. I liked the module very much.
- This module encompasses and improves what was learned in the previous modules, which were also excellent. My most sincere thanks to the 4 teachers for their excellent teachings.
- The professor is prepared and has used these models in practice, although getting the data can be a problem, he has made it clear that doing this work is not something that will happen overnight. I liked the module because the magnitude of the work to be done is achievable in the medium term.
- I think that one of the most important aspect that I have appreciated is the application of the models SFC to the any economy

Please, tell us what could be improved for the next time.

- The location (room) could be improved
- Cursos en español
- Received the information more a prior.
- Introduce more advanced estimation techniques to improve the approach we received.
- For now all very well thanks to the MAJIG team
- More time in R programming models

- The topics are very interesting and to have a higher level of theoretical and practical management it is necessary to have more training time or a second version of this course in which we can delve deeper into the theoretical topics and the SFC model itself. It will also be necessary to have support and direction to be able to assemble the models in our research units.
- Perhaps after the completion of the course it will be necessary to organize a meeting to clarify some doubts regarding the research that has to be carried out in the different research groups. I wonder if the research expected by the project is a theoretical one that models the Bolivian economy, a theoretical and empirical one that models the Bolivian economy and demonstrates some shock as an impact (such as the international shocks in 2015), a predictive model . On the other hand, we would like to know if we will have a specific tutor who can provide us with closer assistance. Finally, thank you for this great training experience to all the teachers and the entire MAJIG team who made it possible for us to approach this new world.
- None.
- I would like this professor and the rest of the MAJIG professors to be able to accompany the work that the different teams are carrying out. Since we are in the learning process, their mentorship would be well received.
- Greater practice of SFC models in econometric software. Although in the last module, we had the opportunity to practice more in the design of the SFC models, which was very good, to continue future research.
- Continue virtual classes 1 to 2 times a month; with specific concrete tasks and revisions by teachers, not abandoning students, and continuing the teaching-learning process.
- I think that it is necessary improved the skills with the software before to start the module