

Macroeconomics for Justice and Inclusive Growth

MAJIG

Milestone 1

Baseline document

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Lead Beneficiary: Universidad de Cartagena

Date of publication: 30/04/2023

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1. Introduction

The Project aims to address the urgent need to re-think macroeconomic policies, tools, and models, to overcome the combination of slow growth, mounting foreign debts and financial instability that in several instances of its history (and also very recently) characterised Latin America. The recent social tensions in the continent constitute an alarm bell and the need to move macroeconomic policies in the direction of justice and inclusive growth is increasingly recognized. The central idea of the project “MAcroeconomics for Justice and Inclusive Growth” is to contribute to this task by using the already existing capacities in the Latin American universities belonging to the consortium, and strengthening them with the help of some world leading experts in the field of macroeconomic modelling working with the European universities of the consortium.

In order to address the above mentioned issues, the Project aims to pursue the following specific objectives:

1. To realise a structured set of training activities that will benefit both Latin American researchers at the beginning of their careers and more expert researchers and teachers willing to strengthen their knowledge in the field of macroeconomic modelling for progressive and inclusive growth. Training activities will be organised around the four fundamental pillars needed to build a SFC macroeconomic model, namely: a) National and Financial Accounts, b) Statistics and Macroeconometrics and c) Advanced Keynesian Macroeconomics; d) step-by-step building of a SFC macroeconomic model.
2. To build, in strict collaboration with LA researchers of the consortium, two SFC macroeconomic “maquette” models - one for Colombia and one for Bolivia. The models we are referring to belong to the tradition of the so-called applied SFC (Stock Flow Consistent) monetary macro models for open economies, originally developed by W. Godley, which are rapidly gaining interest among researchers interested in understanding the relevant world macroeconomic dynamics. “Maquette” models are a fundamental step in the process of building “true” models. Indeed, while incorporating all the relevant features of true models, maquette models are smaller and simpler, as well as easier to estimate econometrically. They allow researchers to become familiar with the analytical tool on a step-by-step basis and therefore progressively able to elaborate their own models. In other words, maquette models are a key intermediate step in any well designed capacity building process. To use a classical metaphor, they are a way of teaching a man to fish instead of giving him a fish.
3. To create in each LA university in the consortium a small research unit on Applied Macroeconomic Modeling in charge of expanding, managing and using, for both research and pedagogical purposes, the above mentioned maquette models. These research units will embark brilliant young researchers and provide policymakers with needed inputs: estimated impact of given policy packages, suggestion of innovative policy packages, etc. Should the capacity building process be successful, these

research units should become able to produce a working paper series dedicated to the dissemination of the research results obtained through the use of SFC macroeconomic models.

4. To strengthen the capacities of LA universities belonging to the consortium to support not only policymakers in their choices, but also local civil society organisations, think tanks, entrepreneurial associations, etc., willing to be an active part of the democratic debate on different possible macroeconomic options. Whatever the notion of “development” one might have in mind, “ownership” is indeed widely recognized as a “conditio sine qua non” to have it.

According to what detailed in the Project, this baseline document is aimed to establish a sound basis on which to build tailored training programs, designed on the ground of an accurate map of the local needs and the state of art in the macroeconomic teaching and research, and in the distribution of macroeconomic modelling for policy analysis and forecasting.

After this introductory chapter, the second chapter of the document will be devoted to the analysis of Colombia and Bolivia’s context and consequently the presentation of MAJIG’s general objectives.

The third chapter will show the ad-hoc preliminary questionnaires which have been created and disseminated through the Project’s most relevant stakeholders, the findings of which will be analysed in detail in chapter four.

The fifth chapter will present the four sequential and interrelated courses on macroeconomic modelling which have been conceived to address the identified local needs, both internal and external.

Finally, in its last part the document will summarise the most relevant concepts emerged from the previous chapters, it will show the rationale beneath the trainings’ structures and it will highlight their added value in light of MAJIG’s specific objectives.

2. Need analysis and general objectives

Bolivia and Colombia are important middle income Latin American economies. According to the World Bank classification, the former belongs to the group of lower-middle-income economies, the latter to the group of upper-middle-income economies.

Before the outbreak of the pandemic crisis, Bolivia was on a path of slow but steady growth (real per capita GDP increased by around 9% from 2015 to 2019), but the COVID-crisis moved the economy back to 2015 levels, with real per capita GDP falling from 2580US\$ to 2320US\$ in a single year (from 2019 to 2020).

A similar pattern applies to Colombia, where the COVID-crisis provoked a 8% contraction of real per capita GDP from 2019 to 2020. In 2020, this was lower than it was in 2015 (7232 US\$ against 7580US\$). In both cases, thus, COVID stopped a slow but steady process of growth. It is to be remarked that this is different from what was going on in the region as a whole (Latin American and the Caribbean), where real per capita GDP had been on a decreasing trend from 2015 to 2019, and COVID just accelerated the fall.

Thus, in some sense Bolivia and Colombia were to be considered virtuous cases within the region. An important difference between the two economies is related to the dynamics of inequality.

In the case of Bolivia, and with the exception of the period 2013-2016 (falling commodity prices), for the most part of the 2000s poverty and inequality declined substantially, due to strong income growth for households at the bottom part of the income distribution. A 10-point decline of the Gini index took place in the period 2005-2013; and a downward trend was still there from 2017 to the outbreak of the COVID crisis.

Things are different in Colombia, where some progress was made in terms of inequality reduction from 2000 to 2015, but from 2015 onward income inequality as measured by the official Gini index is still on the rise.

The impact of COVID 19 is likely to increase inequality both in Bolivia and Colombia, since government emergency transfers cannot reach the most vulnerable people, i.e. the large pools of informal workers existing in both countries. Above all, over the last two decades these Latin American economies did not address their historical, structural weaknesses, namely their dependence on primary exports and the relevance of the external constraint on growth. As an example, the “golden age” of inequality reduction in Bolivia (2005- 2013) strongly benefited from a process of economic growth that was mainly driven by extractive industries, which in turn benefited from a large demand from export markets in Brazil and Argentina.

This makes these countries’ macroeconomic evolution extremely fragile, too much dependent on the vagaries of international markets. The fragility of the macroeconomic scenario is best illustrated by the evolution of the external debt during the last years: in Bolivia, the external debt-to-GNI ratio increased from 31% to 42% from 2015 to 2020; in Colombia, from 39% to a dramatic 58% over the same period. These figures are truly scary and indicate, as emphasised by ECLAC (Economic Commission for Latin America and the Caribbean, “Fiscal Panorama of Latin America and the Caribbean, 2018), how delicate is macroeconomic management in these countries. In a more recent publication, “The external financial constraint in Latin America and the Caribbean. A Stock-Flow Approach” (2021), ECLAC rightly stresses that, on top of the already mentioned structural weaknesses of the region, the external constraint on economic growth now comes from financial factors rather than those real factors usually emphasised by the literature. In particular, it is argued that the

interactions among financial flows, more flexible exchange rate regimes and external indebtedness are the deep determinants of the diminishing trend in GDP growth.

The growingly important role played by financial factors calls for the use of appropriate macroeconomic models, i.e., models where finance is not taken to be neutral and real-financial interactions are put at the centre of the stage. Therefore, ECLAC suggests “a stock-flow approach” to better understand the potential impact of a set of complementary fiscal policies: the need to strengthen automatic stabilisers and reinforce social protection systems (which would probably improve both the stabilisation and redistributive role of fiscal policy), the need to prioritise infrastructure spending, etc. All of this, of course, requires a better estimation of fiscal multipliers, and this can only be done within the framework of macroeconomic models that, in line with the recent debate in the field, go beyond the canons dictated by the new neoclassical synthesis.

The Project addresses exactly the above described issues: the urgent need indicated by ECLAC to rethink macroeconomic policies, and then macroeconomic tools and models, to overcome the combination of slow growth, mounting foreign debts and financial instability that characterised the very last years in South America. The social tensions that recently took place in the continent (Bolivia and Colombia are no exception) constitute an alarm bell and the need to move macroeconomic policies in the direction of justice and inclusive growth is increasingly recognized.

The central idea of the project “MAcroeconomics for Justice and Inclusive Growth” is to contribute to this task by using the already existing capacities in the Latin American universities belonging to the consortium, and strengthening them with the help of some world leading experts in the field of macroeconomic modelling working with the European universities of the consortium.

The Project aims at fostering research capacities in the field of development macroeconomics in the LA universities belonging to the consortium. Emphasis will be given on building macroeconomic models to evaluate the potential impact of macroeconomic policies for justice, sustainable development and inclusive growth, in line with the Sustainable Development Goals adopted by the international community (in particular, but not exclusively, goals 1, 4, 8 and 16). Sustainability is here to be understood as social, financial and environmental sustainability.

In the aftermath of the very severe world crisis of 2007-2009, and during the ensuing debate on how to deal with it, several economists around the world recognized that:

a) macroeconomic shocks and policies do not produce a purely short run effect, but may shape the longer term development trajectory of any given economy and its social, financial and environmental features;

b) most existing macroeconomic models had proved unable to predict that tough crisis and its consequences, and therefore the need for some more palatable alternative was clearly emerging.

Among these alternatives, the so-called Stock-Flow Consistent (SFC) macroeconomic models seemed to be very promising, since their inventor, Wynne Godley (with the help of Marc Lavoie and Gennaro Zezza), was one among the very few who saw the crisis coming (see Bezemer DJ (2010) Understanding financial crisis through accounting models. *Accounting, Organizations and Society* 35(7):676–688. <https://doi.org/10.1016/j.aos.2010.07.002>).

The discourse on the relevance of SFC models became progressively more and more important, going beyond the borders of the academy and deserving attention both among top journalists (see for example: <https://www.nytimes.com/2013/09/11/business/economy/economists-embracing-ideas-of-wy-nne-godleylate-colleague-who-predicted-recession.html>) and, above all, top policy makers: in his quality of Vice-President of the European Central Bank, Vitor Constancio gave in 2017 the opening speech at the Annual Research Conference and stressed the need to “recuperate the Keynesian view that demand shocks and the paradox of thrift can be important for economic performance”, “the notion that the economy is not quickly self-correcting and requires public policies” and “the notion that the financial sector can endogenously generate imbalances with significant consequences for the real economy” (see <https://www.ecb.europa.eu/press/key/date/2017/html/ecb.sp170925.en.html>).

These are certainly the three pillars around which SFC models are built. In his speech, Vice-President Constancio also remarked that “stabilisation policies are crucial and that not only growth counts as significant fluctuations leave behind permanent losses. Related to this, is the notion that demand shocks can affect the supply side via hysteresis effects in labour supply and the capital stock via investment deceleration”. In other and simpler words: macroeconomic shocks and policies are not a purely short-run issue, but it is now recognized that they affect and shape the medium- to long-run development path of any economy. This is the reason why it is fundamental to have good (better) macro models and research capabilities have to be strengthened in terms of building, updating and using SFC macro models for policy purposes.

In order to reach these general goals, the consortium tries to merge three crucial ingredients:

- 1) the participation to the consortium of some of the world's leading experts in the construction of SFC macro modelling;
- 2) the participation to the consortium of European universities and professors with a proven experience in the field of university cooperation, especially with Latin American universities;
- 3) the participation in the consortium of those Latin American universities that explicitly requested to strengthen their research capabilities in the field of macro modelling and belonging to countries where macroeconomic management has always constituted a key and delicate aspect of the social fabric.

3. Preliminary questionnaires

Below, a short presentation of the questionnaires which have been prepared and distributed to the different MAJIG stakeholders in the preliminary phase of the Project, including the answers provided by them.

3.1 Staff's preliminary questionnaires

- Institute?

Staff 1: Universidad Nacional de Colombia (UNAL)

Staff 2: Universidad de La Salle

- Has your institute ever been involved in similar projects (on similar topics)? If yes, please list them below indicating their name, website if available, exact topic, and whether they are concluded or still running.

Staff 1: GEMMES Project (UNAL is the partner in Colombia for the gemmes project from the (AFD) French Development Agency). In this project we use stock flow consistent models to assess the vulnerabilities of the Colombian economy in the transition to low carbon economies.

Staff 2: On similar topics, we don't think so, but we don't know exactly, because the University has a PIC Number (947956266)

- Please list below the team that your institute will assign to the project, indicating:
 - 1) Name and function (e.g. project manager, senior expert/advisor/researcher, junior expert/advisor/researcher, trainers/teachers, technical personnel, administrative personnel etc.,
 - 2) Role/tasks (What they will be in charge of in the local Majig project team),
 - 3) Professional profile and expertise.

Please add as many people as you deem necessary.

Staff 1: Diego Guevara (Project manager, associate professor at UNAL) -Alvaro Moreno (Senior researcher, associate professor). Santiago castaño. PhD STUDENT, Manuel Rubio , PhD Student. Leonardo Rojas Senior researcher.

Staff 2: Gonzalo Combata - Researcher/ Teacher - Coordination Camilo Guevara - Researcher /teacher - Coordination Oscar Eduardo Perez - Researcher /Teacher Hotbed of research - Economía y desarrollo humano Group - Students Sander Rangel - Economics program director.

- Please provide a short description of your institution.

Staff 1: Universidad Nacional de Colombia is the biggest public university in Colombia AND TOP 10 ranked in Latin America.

Staff 2: La Salle University is a private Christian university founded and run by the Brothers of the Christian Schools, whose headquarters are in Bogotá, the capital of Colombia. It has about 14,000 students spread over three main locations. The economics program is now part of the recently created Faculty of Economics, Business and Sustainable Development. In this economic program we are trying to open ways to heterodox approaches.

- What is the specific contribution/expertise/asset that your institute may bring to the project?

Staff 1: SFC modelling in emerging economies.

Staff 2: Within the Economy and Human Development group, we have been working on the problem of jobless growth, which has become much more visible in the pandemic. We have the opportunity to learn and develop new conceptual tools so that students who may possibly get jobs in the public sector have new approaches to public policy problems. Together with the promotion of these relationships with the public sector, our institution can contribute to this great problem of jobless growth from a theoretical and accounting approach different from the approach of the main current.

Impact & Sustainability

- Who are the target groups in your institute? How will the target groups benefit concretely from the project and what would change for them?

Staff 1: Graduate students and CID (Centro de investigaciones para el desarrollo). Graduate students will have new tools for research specially empirical SFC modelling learning. CID will strengthen its research tools for future projects and consults where SFC can be used.

Staff 2: Mainly students of our hotbed of research, and broadly, students with interests in the problem of jobless growth, but also teachers with interests in heterodox approaches to macroeconomics. They are going to learn a different approach to think about economic problems and some skills (SFC models) to analyse concrete problems, in our case, the problem of jobless growth.

- What are the expected short, medium and long-term effects you expect the project to have on your institute?

Staff 1: Policy partners discussions with the sfc outcomes. Graduate student thesis using these tools. More connection with European centres and exchange.

Staff 2: 1) Strengthen skills in a faculty with a medium-low level. 2) Have a laboratory of SFC models in the faculty. 3) Attempt to influence the way public policy is thinking and design.

- What kind of communication and dissemination activities do you think your institute will be able to carry on in order to promote the activities/results and maximise the impact? e.g. newsletter/ social media/ events, conferences, webinars in the university or outside the university? (to whom, which format, how many, etc.).

Staff 1: Seminars to graduate students at the university. Launching conference. Format: Online/in person.

Staff 2: Social media/ Events / conferences, Webinars in the university. Promote academic exchange with other universities of the project.

- Describe the follow-up of the project after the EU funding ends. How will the project impact be ensured and sustained? What will need to be done? Which parts of the project should be continued or maintained? How will this be achieved? Which resources will be necessary to continue the project? How will the results be used?

Staff 1: no answer.

Staff 2: We believe that if we can positionate the importance of these projects in the faculty, the faculty can continue financing the laboratory and the activities we are going to develop for the students. Also, as a part of the normal research projects and events, we can continue collaborating with other scholars of the projects.

- With specific reference to the centres that MAJIG project intends to create: will your institute be able to self-sustain it even after the project lifetime? If yes, how?

Staff 1: it is possible through the CID centre to have 1 permanent graduate student and one professor in charge of the project.

Staff 2: It's possible to apply for internal calls (university resources to investigate) or national investigation calls.

Risks & Mitigation Strategies

- Please provide a description of the risks that you think may arise in the implementation of the activities. For each risk, please indicate: 1) description of the risk, 2) which WP the risk might harm, 3) Proposed risk-mitigation measures, 4) likelihood that the risk will materialise (high, medium, low).

Staff 1: The main risk is regarding different partners' communications and the macroeconomic risk of the X-Change rate volatility of the latin american currencies.

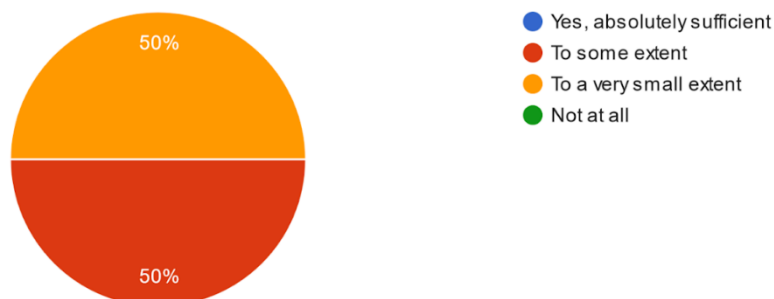
Staff 2: A) Few teachers, 1) In our faculty, we are only 2 teachers, until now, that handle heterodox approaches, and although we know the fundamental concepts of SFC models, we would need more training in these models. 3) With the financing of the project, training courses could be offered, provided by other colleagues in Colombia, who also participate in the project. 4) Low.

The Macroeconomic Context

- Do you think you have in your institution sufficient research capabilities in terms of applied macroeconomic modelling?

Staff 1: To some extent.

Staff 2: To a very small extent.



- If not, what is missing in your opinion? Briefly explain.

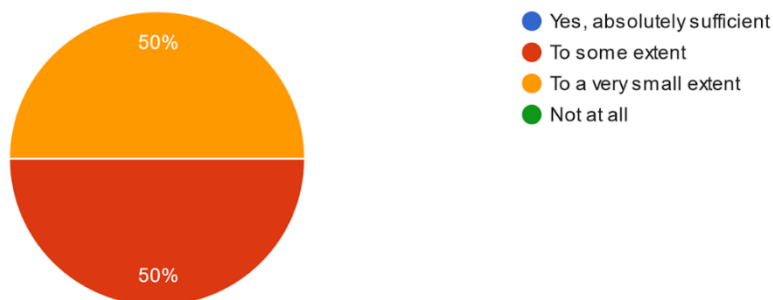
Staff 1: no answer.

Staff 2: The students don't have good courses in macro modelling in general. We need to supply some of these failures.

- Do you think you have in your institution sufficient teaching capabilities in terms of applied macroeconomic modelling?

Staff 1: To some extent.

Staff 2: To a very small extent.



- If not, what is missing in your opinion? Briefly explain.

Staff 1: no answer.

Staff 2: no answer.

- Is there in your institution a specific department/research centre whose main task is to develop and use macroeconomic models for research and/or policy purpose? Could you briefly describe it?

Staff 1: DNP: Departamento Nacional de planeación (economic studies).

Staff 2: No. In the hotbed of research, we are trying to construct, but we don't have a centre.

- If yes, how many people are working in that department/research centre

Staff 1: 10.

Staff 2: no answer.

- If yes, please specify the status of people working in that department/research centre (undergraduate students, post-graduate students, researchers, professors at different levels, etc.).

Staff 1: professors and researchers

Staff 2: no answer.

- If a department/research centre whose main task is to develop and use macroeconomic models for research and/or policy purpose already exists, what are the main constraints on its smooth functioning (ex: hardware, software, personnel, etc.)

Staff 1: no answer.

Staff 2: no answer.

- Is macroeconomic research and teaching in your institutions biased towards the so-called “mainstream” theory and tools (neoclassical, DSGE models, etc.) or are the so-called “heterodox” approaches (post-Keynesian and structuralist macroeconomics, SFC and ABM models, etc.) given a sufficient weight? Explain your opinion.

Staff 1: mostly heterodox, UNAL is one of the universities in the countries who are in the heterodox approach.

Staff 2: Yes. Mainstream theory is the axis of the program, but the level in neoclassical theory is low also.

- In case you are, why are you interested in developing research and teaching capabilities in the field of applied SFC models? Briefly explain.

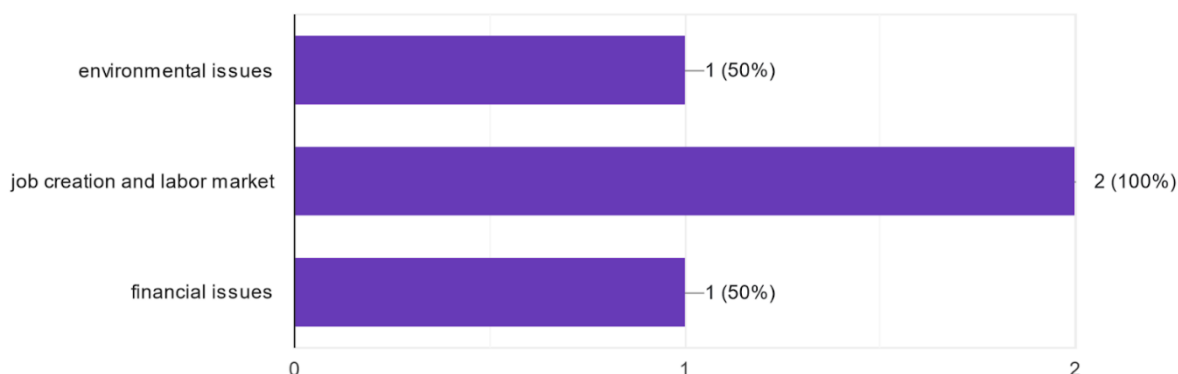
Staff 1: SFC approach is an opportunity to expand the standard models and understand economics from a realistic approach and with computational tools.

Staff 2: Because accounting is a better foundation for understanding macroeconomics problems like jobless growth than the maximising utility approach.

- In case you are interested in developing research and teaching capabilities in the field of applied SFC models, what are the fields of application you have in mind (ex: environmental issues, job creation and labour market, financial issues, etc.). Please, choose as many options as appropriate.

Staff 1: environmental issues; job creation and labour market.

Staff 2: job creation and labour market; financial issues.



- In case you are interested in developing research and teaching capabilities in the field of applied SFC models, do you think this would make it possible for your institution to strengthen collaboration with other academic or non-academic institutions in your country or abroad? Which ones?

Staff 1: yes, teaching co-joint seminars, online seminars. co-advice thesis.

Staff 2: Universidad Nacional, Universidad de Cartagena, DNP.

- Do you think the development of a project on applied SFC macroeconomic models and the creation/expansion of a research centre in this field is complementary with other projects of your institution? Briefly explain.

Staff 1: Yes, currently we have a project with AFD in this topic and we can continue expanding the application of this tools;

Staff 2: Yes. Probably The CIER (Centro de estudios e investigaciones rurales) and other observatories of the faculty have projects with the same interests.

- In case you are interested in the creation/expansion/strengthening of a research centre in the field of applied SFC models, how many young scholars (“mature” undergraduates, post-graduates, researcher, etc.) could you directly involve in such a project for the next 3 years?

Staff 1: 3.

Staff 2: Probably almost 10.

- Do you think this kind of project could reinforce the potential of financial sustainability of your institution? Why?

Staff 1: yes, as a public institution any external funding helps the opportunities of funding additional students and projects.

Staff 2: Yes, Probably the centre created could participate in Internal calls.

- Comment, suggestions?

Staff 1: no comments/suggestions.

Staff 2: no comments/suggestions.

3.2 Students' preliminary questionnaires

- Institute you are from?

Student 1: Universidad de la Salle

Student 2: La salle university, Colombia

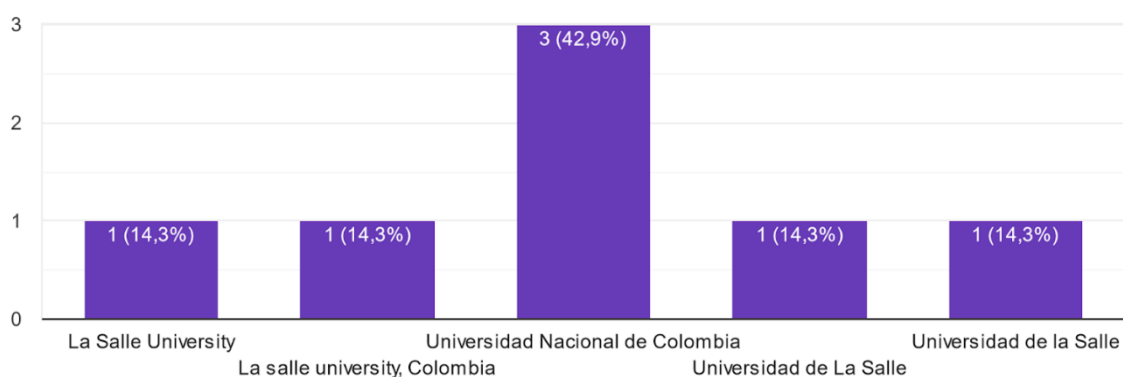
Student 3: La Salle University

Student 4: Universidad de La Salle

Student 5: Universidad Nacional de Colombia

Student 6: Universidad Nacional de Colombia

Student 7: Universidad Nacional de Colombia



- Your status?

Student 1: Undergraduates and researcher

Student 2: Undergraduates

Student 3: Undergraduate

Student 4: Graduate

Student 5: Undergraduate

Student 6: Undergraduate

Student 7: University student

- Your field of study/research?

Student 1: Heterodox macroeconomics

Student 2: growth, employment and technology.

Student 3: Financial fragility

Student 4: Macroeconomics of development

Student 5: macroeconomics

Student 6: Economics/macroeconomics

Student 7: Growth and unemployment

- Do you think you have in your institution sufficient research capabilities in terms of applied macroeconomic modelling?

Student 1: Yes, absolutely sufficient

Student 2: To a very small extent

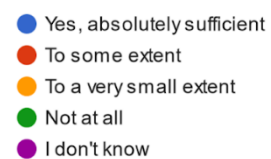
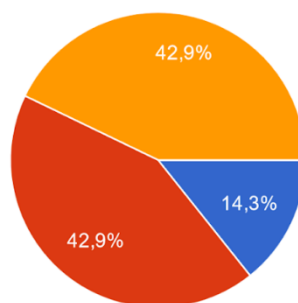
Student 3: To some extent

Student 4: To some extent

Student 5: To a very small extent

Student 6: To a very small extent

Student 7: To some extent



- If not, what is missing in your opinion? Briefly explain.

Student 1: No answer.

Student 2: No answer.

Student 3: No answer.

Student 4: No answer.

Student 5: More economic support and academic spaces to listen and develop the students ideas.

Student 6: Economic resources to accomplish the research projects. The lack of these has not allowed to have the adequate infrastructure and pay to researchers in this area. In addition, even though there is a macroeconomic analysis division in the faculty, it has not involved macroeconomic modelling in its research topics for these limitations.

Student 7: No answer.

- Do you think you have in your institution sufficient teaching capabilities in terms of applied macroeconomic modelling?

Student 1: Yes, absolutely sufficient

Student 2: To some extent

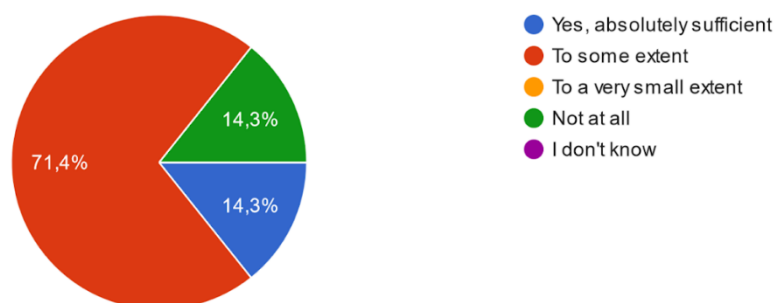
Student 3: To some extent

Student 4: To some extent

Student 5: Not at all

Student 6: To some extent

Student 7: To some extent



- If not, what is missing in your opinion? Briefly explain.

Student 1: No answer.

Student 2: No answer.

Student 3: No answer.

Student 4: No answer.

Student 5: The studies plan just has emphasis in microeconomic modelling.

Student 6: There are a couple of professors who do research in this area. However, the macroeconomics area in economics major does not have any approximation to applied situations. Then, the student's contact and learning of these topics are almost null.

Student 7: No answer.

- Is there, in your institution, a specific department/research centre whose main task is to develop and use macroeconomic models for research and/or policy purpose?

Student 1: Yes

Student 2: No

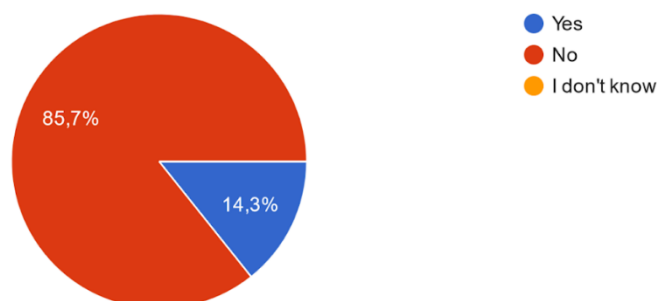
Student 3: No

Student 4: No

Student 5: No

Student 6: No

Student 7: No



- Did you know about the existence of such centres in general (even beyond your institute)?

Student 1: Yes

Student 2: Maybe

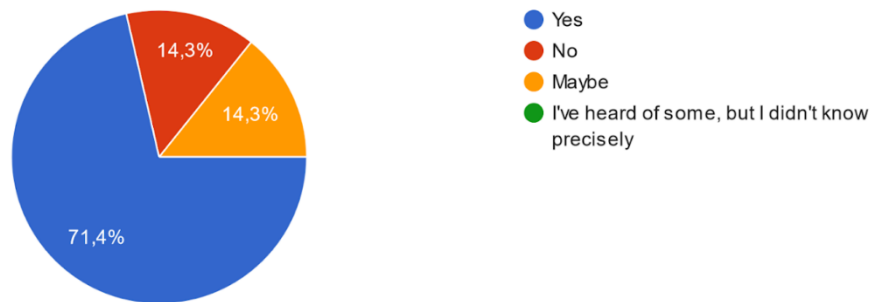
Student 3: Yes

Student 4: Yes

Student 5: Yes

Student 6: Yes

Student 7: No



- In your opinion, what is the main scope of such centres?

Student 1: Forecasting for Policy design support; Building expertise to consult public entities (governmental actors, NGOs, etc.); Building expertise to be employed in today's labour market.

Student 2: I don't know.

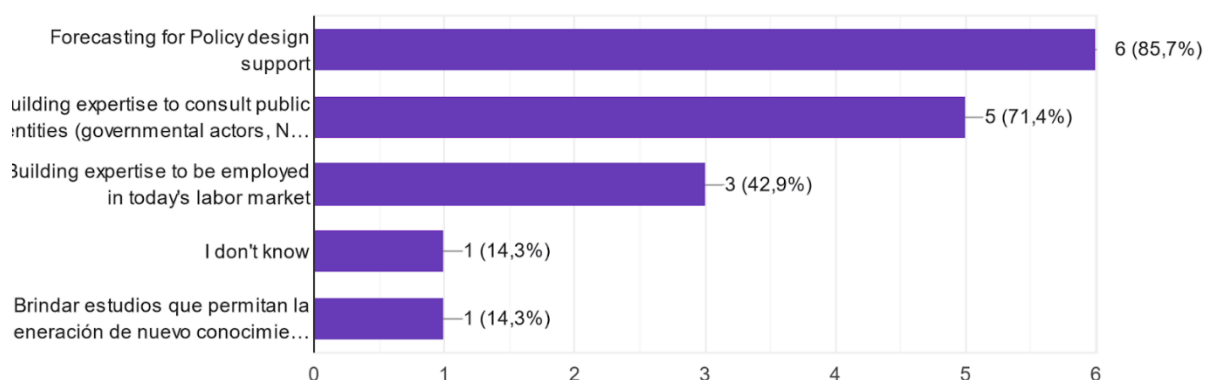
Student 3: Forecasting for Policy design support; Building expertise to be employed in today's labour market

Student 4: Forecasting for Policy design support; Building expertise to consult public entities (governmental actors, NGOs, etc.).

Student 5: Forecasting for Policy design support; Building expertise to consult public entities (governmental actors, NGOs, etc.).

Student 6: Forecasting for Policy design support; Building expertise to consult public entities (governmental actors, NGOs, etc.).

Student 7: Forecasting for Policy design support; Building expertise to consult public entities (governmental actors, NGOs, etc.); Building expertise to be employed in today's labor market; Altro: Brindar estudios que permitan la generación de nuevo conocimiento aplicado a nuestra dinámica Latinoamericana.



- How interested are you in gaining experience in such centres? 1 (Not interested) - 5 (very much interested)

Student 1: 5

Student 2: 5

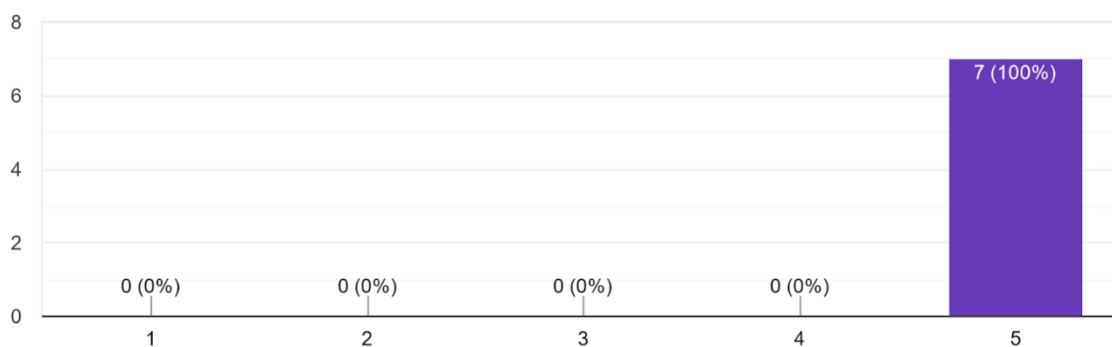
Student 3: 5

Student 4: 5

Student 5: 5

Student 6: 5

Student 7: 5



- Why are you interested in gaining experience there? please chose as many options as necessary

Student 1: Important experience for future job/ career; Dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs; It's a new sphere of research in my country and I think it will grow in importance more and more; Altro: The importance of understanding and analysing these issues to provide alternative solutions to economic problems.

Student 2: Important experience for future job/ career; dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs;

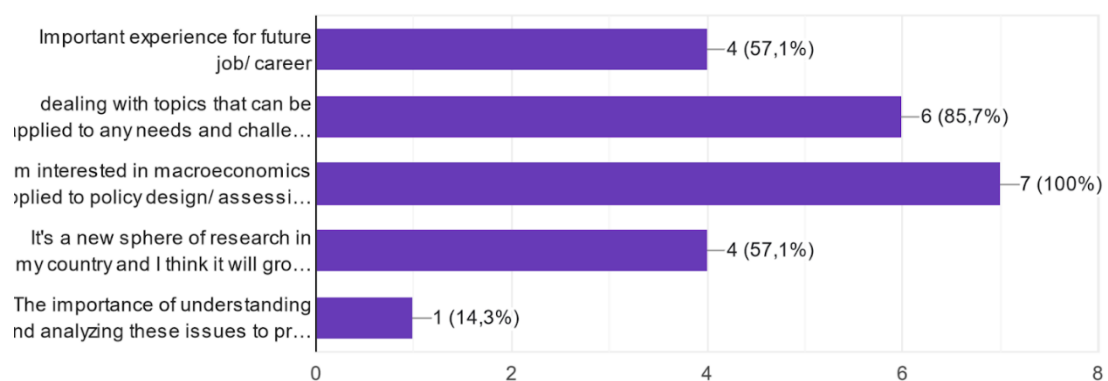
Student 3: Important experience for future job/ career; Dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs.

Student 4: Dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs; It's a new sphere of research in my country and I think it will grow in importance more and more.

Student 5: Dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs.

Student 6: I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs; It's a new sphere of research in my country and I think it will grow in importance more and more.

Student 7: Important experience for future job/ career; Dealing with topics that can be applied to any needs and challenges of today; I'm interested in macroeconomics applied to policy design/ assessing my Country's concrete needs; It's a new sphere of research in my country and I think it will grow in importance more and more.



- If a department/research centre whose main task is to develop and use macroeconomic models for research and/or policy purpose already exists, do you have an idea on what the main weaknesses are? Please chose as many options as appropriate

Student 1: Lack of hardware; Lack of software; Lack of personnel.

Student 2: I don't know

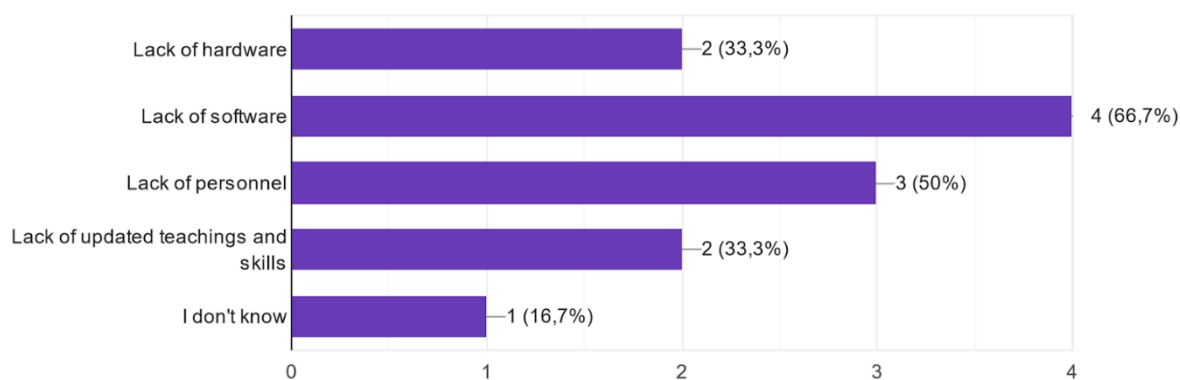
Student 3: Lack of software; Lack of personnel.

Student 4: Lack of software; Lack of updated teachings and skills.

Student 5: No answer.

Student 6: Lack of hardware; Lack of software; Lack of updated teachings and skills.

Student 7: Lack of personnel



- Is macroeconomic research and teaching in your institutions biased towards the so-called “mainstream” theory and tools (neoclassical, DSGE models, etc.) or are the so-called “heterodox” approaches (post-Keynesian and structuralist macroeconomics, SFC and ABM models, etc.) given a sufficient weight? Explain your opinion?

Student 1: Mainly towards the orthodox neoclassical approaches, that is why it is important to focus the analysis on alternative heterodox theories such as post-Keynesianism, among others, in order to be able to provide real solutions to current problems.

Student 2: No, the university is very open minded compared to others. La salle try to teach different theories and tools in different areas.

Student 3: It has a variety of professors, and therefore investigations, in which the different thoughts are exemplified. As for macroeconomics classes, there are both professors who open the debate towards the heterodox and those who focus clearly on the orthodox explanation.

Student 4: There is a very marked bias towards orthodox models and a very slight mention of heterodox models

Student 5: The emphasis in the university is mainstream knowledge. The obligatory courses teach models based in neoclassical theory. However, the university brings the opportunity to learn some different with a very few elective courses focused on heterodox theories

Student 6: No, it is not given, even if there are certain approaches to "heterodox" macroeconomics for instance there is an elective lecture on Post-Keynesian theory. These theories and methods are marginal, they are the exception and not the rule. Because the obligatory lectures are focused on “mainstream” theory, and if the student does not have the "interest" to go further in this topic, it will be difficult to learn it.

Student 7: At the National University, the courses taught and the theory used to carry out the classes are, in most cases, orthodox. However, heterodoxy has generated important spaces for research and criticism that have managed to have an alternative focus on issues as relevant as unemployment, inflation or growth driven by demand.

- In case you are, why are you interested in developing research and teaching capabilities in the field of applied SFC models? Briefly explain.

Student 1: These models are complete to the extent that they guarantee the correct analysis of the flows and stocks of the economy, generating tools to provide alternative, rigorous and analytical solutions to economic problems.

Student 2: I am interested in developing these things because I love my career, and I want to know more about SFC, always interested in learning and teaching new things.

Student 3: Beyond contributing to the expansion of knowledge within science, it is necessary to know other methods to respond to problems that have not been resolved by conventional means.

Student 4: With the aim of applying them in research methodologies that allow explaining the macroeconomic dynamics of my region.

Student 5: I believe that with more understanding and capabilities to macroeconomic model applications, and with an important support, we can do significant changes in and get better the life of thousands

Student 6: My main interest in learning and researching applied SFC models is to get close to the institutions (Research centres/ government actors etc) to more pluralistic macro-modeling that helps to better understand the dynamics of economics and to make better decisions.

Student 7: This type of models allow the generation of public and economic policies from another approach, which allows analysing the economic reality of the country considering the stocks and flows that national companies may have with the rest of the world. Likewise, it provides an analysis of our economy with models that fit more effectively to its size and complexity.

- In case you are interested in developing research and teaching capabilities in the field of applied SFC models, what are the fields of application you have in mind? Please, choose as many options as appropriate.

Student 1: environmental issues; job creation and labour market; financial issues; Altro: financial fragility, aggregate demand, liquidity.

Student 2: environmental issues; financial issues;

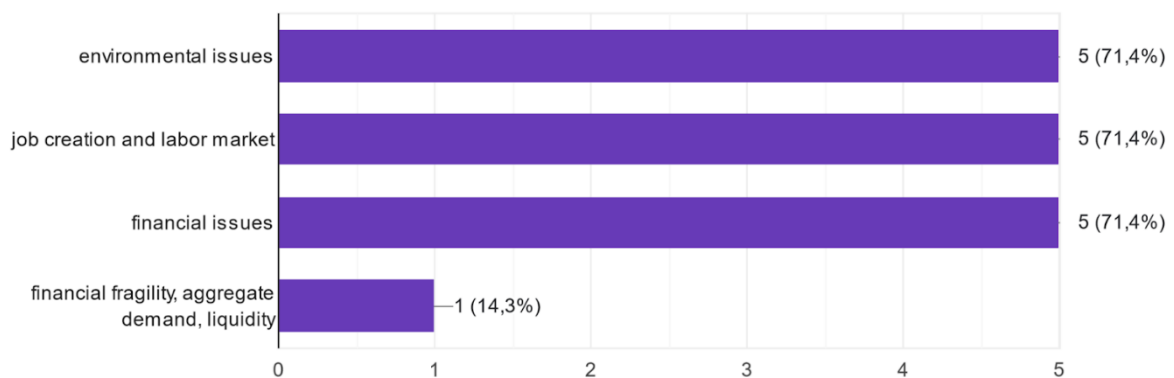
Student 3: job creation and labour market; financial issues.

Student 4: environmental issues; financial issues.

Student 5: environmental issues; job creation and labour market.

Student 6: environmental issues; job creation and labour market; financial issues.

Student 7: job creation and labour market



- In case you are interested in developing research and teaching capabilities in the field of applied SFC models, do you think this would make it possible for your institution to strengthen collaboration with other academic or non-academic institutions in your country or abroad? Which ones?

Student 1: Yes, research in this field allows the interconnection of knowledge in order to share it with other institutions, democratising knowledge

Student 2: Yes, because we have done more research, seminars and consultations with the government. build more knowledge for new generations and try to better our country with new policies.

Student 3: No answer.

Student 4: Of course, the learning and teaching of these models allow the relationship and exchange of knowledge between scientific communities to be substantially important in contributing to changing orthodox methodological paradigms.

Student 5: Yes, white institutions like AFIT, EAEPE, IIPPE or SASE for example

Student 6: Yes, the CID (development research centre) of the university has made several efforts for linking their research with non-academic institutions. In fact, in a conversation with Professor Gonzalo Combata, he told us about the possible interest of financial institutions, unions, the national planning department, among others, for having in their agendas this type of modelling.

Student 7: Yes, the development of new capabilities in the context of the Latin American economy can have the consequence of strengthening relationships with other higher education institutions in the region. In the same way, there can be a greater connection with the institutions that generate policies within our country.

- In case you are interested in the creation/expansion/strengthening of a research centre in the field of applied SFC models, how many young scholars ("mature" undergraduates, post-graduates, researcher, etc.) could you directly involve in such a project for the next 3 years?

Student 1: Between 10 to 50 university students, researchers, etc.

Student 2: I think, we have involve 150 or more young scholars

Student 3: 2

Student 4: We are currently a research hotbed made up of at least 6 people interested and predisposed to work on these models.

Student 5: No answer.

Student 6: A year ago there was an initiative to create a study group on heterodox macroeconomics in the faculty and about 17 people actively participated. A similar figure could be interested in the project.

Student 7: I estimate that I could involve around 5 people in the research centre in the next 3 years.

- Do you think being involved in this kind of project would be a valuable asset for your institute?

Student 1: Yes, absolutely

Student 2: Yes, absolutely

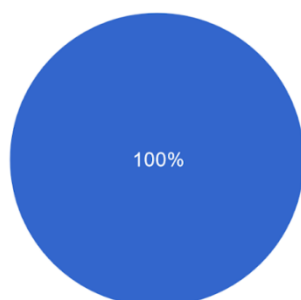
Student 3: Yes, absolutely

Student 4: Yes, absolutely

Student 5: Yes, absolutely

Student 6: Yes, absolutely

Student 7: Yes, absolutely



- Do you think being involved in this kind of project would be a valuable asset for you and your personal career?

Student 1: Yes, absolutely

Student 2: Yes, absolutely

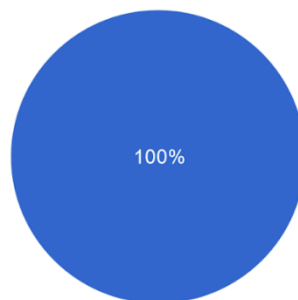
Student 3: Yes, absolutely

Student 4: Yes, absolutely

Student 5: Yes, absolutely

Student 6: Yes, absolutely

Student 7: Yes, absolutely



- Why?

Student 1: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; Networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view; Altro: Provide alternative solutions and unorthodox approaches to current economic problems.

Student 2: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; Networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view.

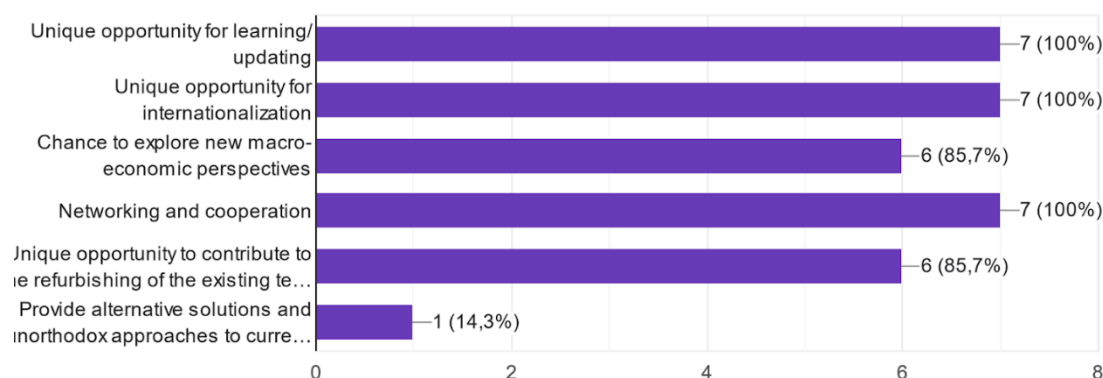
Student 3: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; Networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view.

Student 4: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view.

Student 5: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; Networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view.

Student 6: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; Networking and cooperation.

Student 7: Unique opportunity for learning/updating; Unique opportunity for internationalisation; Chance to explore new macro-economic perspectives; networking and cooperation; Unique opportunity to contribute to the refurbishing of the existing teaching/research structure and give my point of view.



- How would you be involved in an International EU-funded project?

Student 1: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes); Be consulted in the building and delivering of new courses; Be consulted in the building of research centres; Get my voice heard (e.g. via the elaboration of a Position Paper on students' view); Direct interaction with EU professionals.

Student 2: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes); Be consulted in the building and delivering of new courses; Be consulted in the building of research centres; Get my voice heard (e.g. via the elaboration of a Position Paper on students' view); Direct interaction with EU professionals.

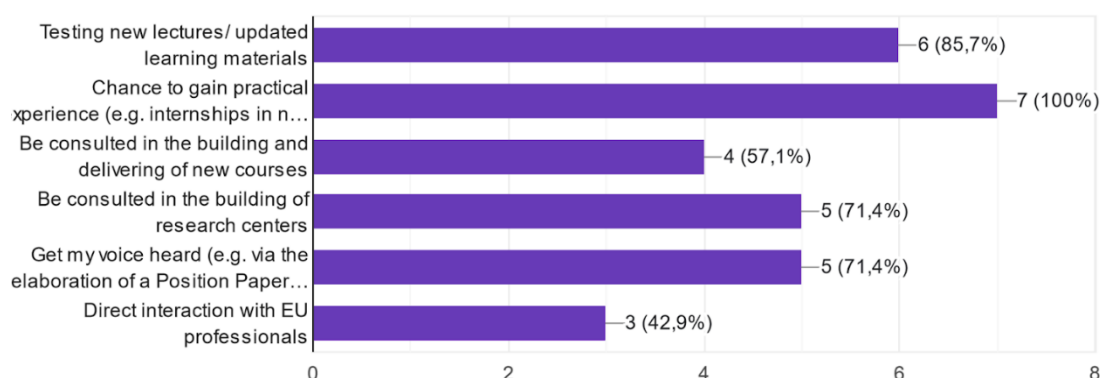
Student 3: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes)

Student 4: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes); Be consulted in the building and delivering of new courses; Be consulted in the building of research centers; Get my voice heard (e.g. via the elaboration of a Position Paper on students' view).

Student 5: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes); Get my voice heard (e.g. via the elaboration of a Position Paper on students' view).

Student 6: Testing new lectures/ updated learning materials; Chance to gain practical experience (e.g. internships in non-academic institutes); Be consulted in the building of research centres

Student 7: Chance to gain practical experience (e.g. internships in non-academic institutes); Be consulted in the building and delivering of new courses; Be consulted in the building of research centres; Get my voice heard (e.g. via the elaboration of a Position Paper on students' view); Direct interaction with EU professionals.



- In your view, how important/urgent is it to increase the expertise in Macroeconomic modelling in your institute? 1 (Not important/urgent) - 5 (Very important/urgent)

Student 1: 5

Student 2: 4

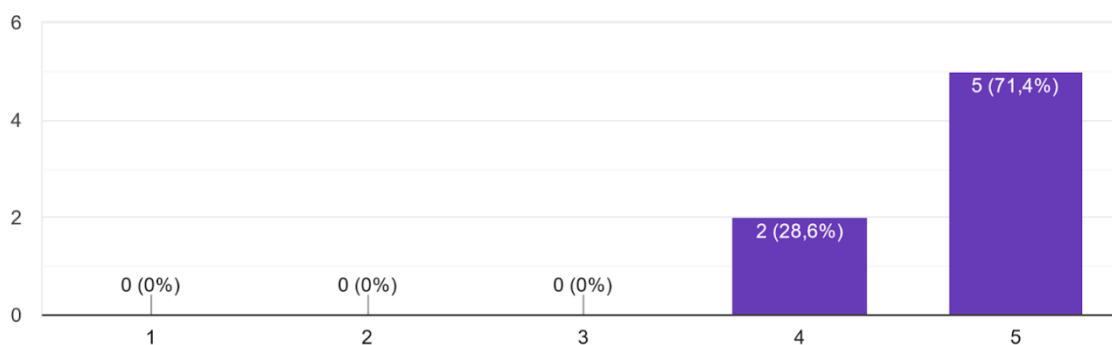
Student 3: 4

Student 4: 5

Student 5: 5

Student 6: 5

Student 7: 5



- In your view, how helpful can be the MAJIG project in this sense? 1 (Not helpful) - 5 (Extremely helpful)

Student 1: 5

Student 2: 5

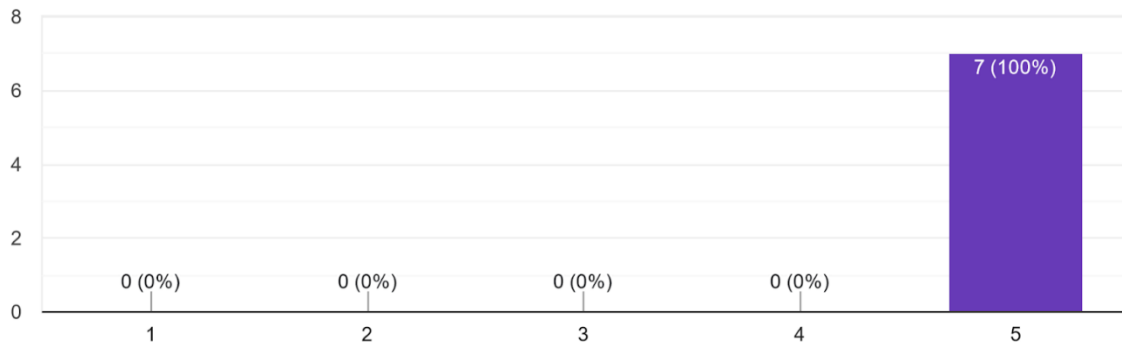
Student 3: 5

Student 4: 5

Student 5: 5

Student 6: 5

Student 7: 5



- In your view, how important/urgent is it to strengthen/build Macroeconomic modelling centres in your institute? 1(Not important/urgent) - 5 (Very important/urgent)

Student 1: 5

Student 2: 4

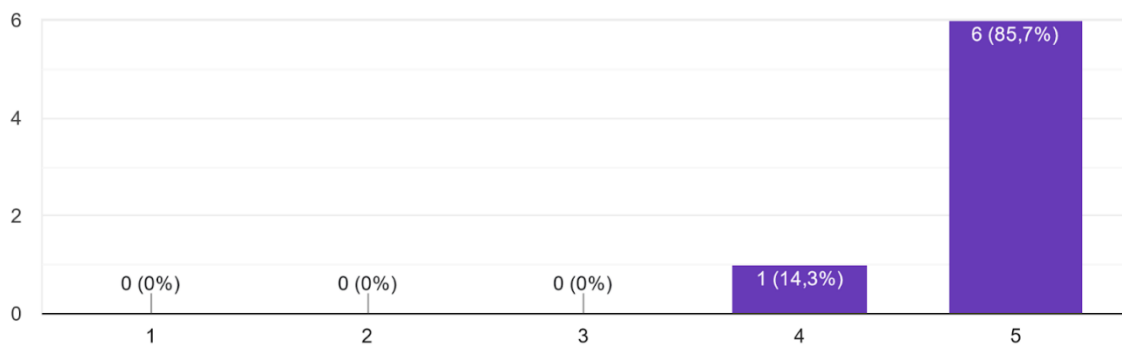
Student 3: 5

Student 4: 5

Student 5: 5

Student 6: 5

Student 7: 5



- In your view, how helpful can be the MAJIG project in this sense? 1 (Not helpful) - 5 (Extremely helpful)

Student 1: 5

Student 2: 4

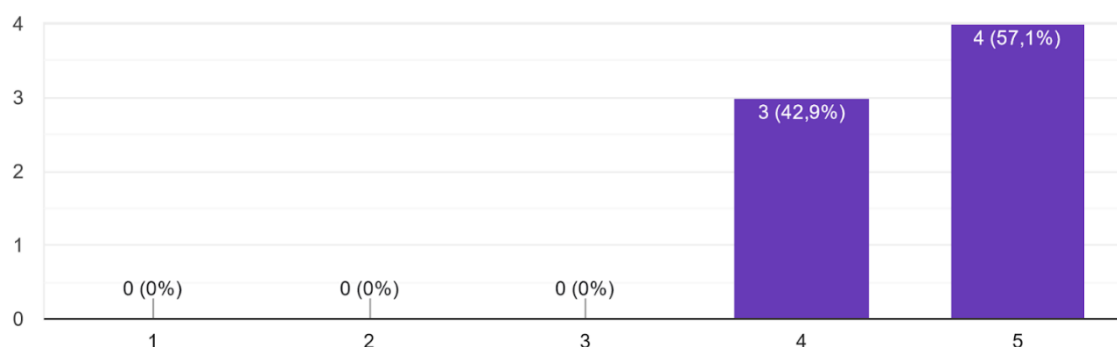
Student 3: 4

Student 4: 5

Student 5: 4

Student 6: 5

Student 7: 5



- In your view, how important/urgent is to foster internationalisation and cooperation with the EU in your institute? 1(Not important/urgent) - 5 (Very important/urgent)

Student 1: 5

Student 2: 5

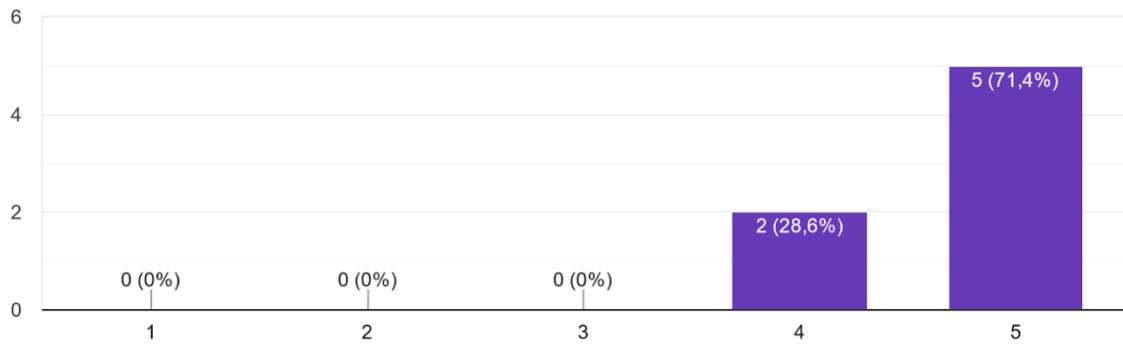
Student 3: 5

Student 4: 5

Student 5: 4

Student 6: 4

Student 7: 5



- In your view, how helpful can be the MAJIG project in this sense? 1 (Not helpful) - 5 (Extremely helpful)

Student 1: 5

Student 2: 5

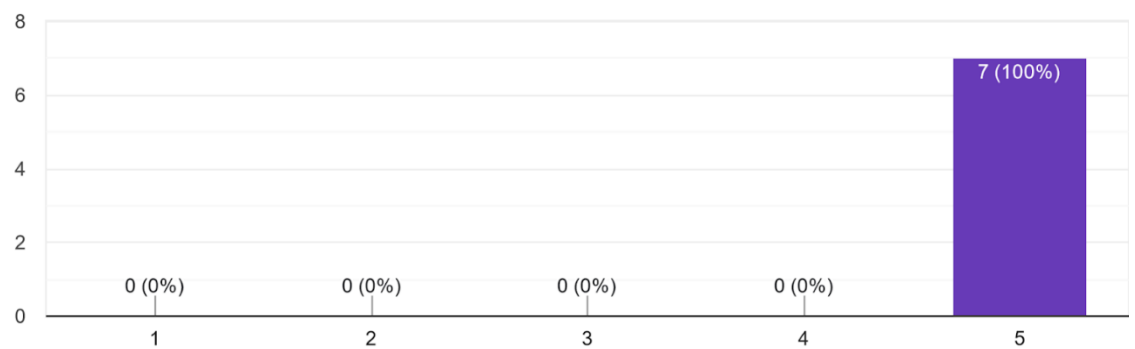
Student 3: 5

Student 4: 5

Student 5: 5

Student 6: 5

Student 7: 5



- In your view, how important/urgent is to foster the collaboration with non-academic stakeholders/entities in your institute? 1(Not important/urgent) - 5 (Very important/urgent)

Student 1: 5

Student 2: 5

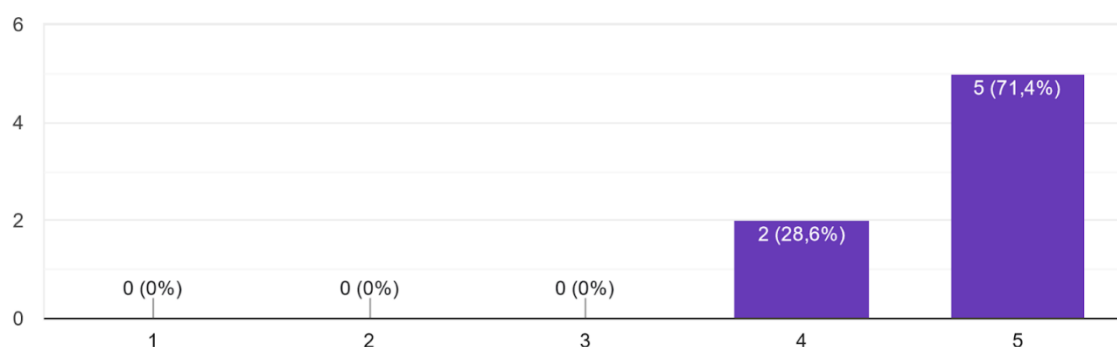
Student 3: 4

Student 4: 5

Student 5: 4

Student 6: 5

Student 7: 5



- In your view, how helpful can be the MAJIG project in this sense? 1 (Not helpful) - 5 (Extremely helpful)

Student 1: 5

Student 2: 5

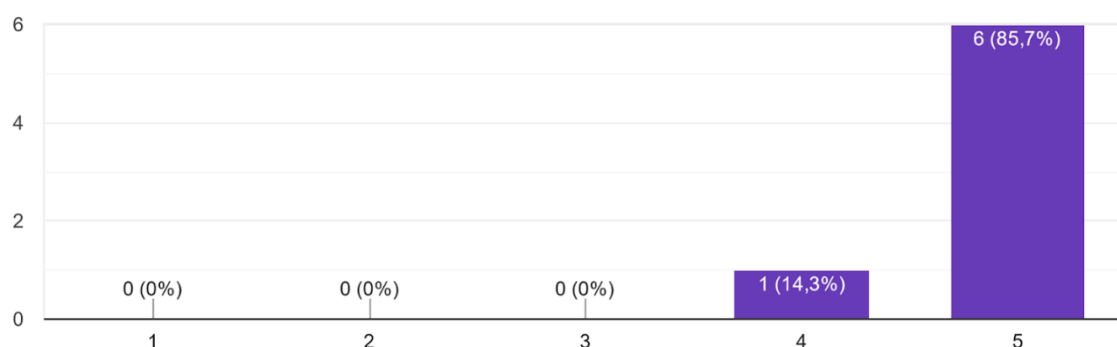
Student 3: 5

Student 4: 5

Student 5: 5

Student 6: 4

Student 7: 5



- Please, share with us any other comment, wish, etc. Is there any aspect that we have not inquired in the questionnaire? Feel free to share your ideas!

Student 1: Thank you very much for the opportunity. On behalf of the research hotbed "Alternative Approaches to the Macroeconomics of Development" of Universidad de la Salle (Colombia), we are quite interested in this opportunity, in addition to being able to learn and provide our knowledge in the field of research in this type of models so important for today's society.

Student 2: nothing, i am very excited to start.

Student 3: No comments.

Student 4: No comments.

Student 5: No comments.

Student 6: I want to express my gratitude to the professors and people involved in this relevant initiative in the macroeconomic field. And if it is possible, I would like to have more information about events or other future projects.

Student 7: My expectations for this project are very high, I believe that these spaces are very important to explore new knowledge, which is very useful both personally and at a societal level. Likewise, I believe that it is the moment, since the country is going through a context of recession in which it is very important to generate policies that really consider the problems and the capacity that a country like Colombia has to be able to reactivate its economy in a efficient, leaving aside the failed recipes that have been proposed by the central government.

4. Questionnaires' findings

Research capabilities on applied macroeconomic modelling

According to the respondent, these capabilities are only present “to some extent” in the Universidad Nacional de Colombia and the Universidad de Cartagena; in all other cases, these capabilities are said to be present “to a very small extent” or absent at all (this was the case of the Universidad Mayor de San Andrés). The Universidad of Cartagena stresses that, notwithstanding the presence of some individual researcher, there is no dedicated team to build macroeconomic models and estimate policy simulations. In all cases, willingness is expressed to reinforce these capacities. In the case of the Universidad Mayor de San Andrés, willingness is expressed to take advantage of MAJIG to introduce the issue of macro modelling in the already existing MA program in Development Economics and Ph.D program in Development Sciences.

Teaching capabilities on applied macroeconomic modelling

According to the respondent, these capabilities are only present “to some extent” in the Universidad Nacional de Colombia. In all other cases, these capabilities are said to be present “to a very small extent” or absent at all (this was again the case of the Universidad Mayor de San Andrés).

Research units

In none of the five Latin American partner universities there is a research unit/centre/group dedicated to macroeconomic modelling for policy analysis. This is not only due to insufficient research capabilities (see above), but also to time constraints and financial constraints (software licences, databases, etc.).

MAJIG is seen as an important opportunity to overcome these limitations and establish small research/units working on these topics. To be more precise, most respondent put emphasis on the need to build and use SFC macroeconomic models to study: a) environmental issues (green finance, the relation between economic growth and climate change, etc.); b) financial issues (external debt sustainability); c) job creation and labour market; d) multisectoral models. Bolivia and Colombia are indeed characterised, like most countries in the region, by productive heterogeneity, informality, and reliance on primary goods exports. Therefore, working with multi-sectoral macroeconomic (not purely demand-driven) models is seen as a priority.

Interestingly, the Universidad Mayor de San Andres would like to establish a small research unit on macroeconomic modelling within the already existing CIDES-UMSA post-graduate centre, and to do that in collaboration with two young researchers currently working with the Bolivian Ministry of the Economy.

This is exactly what MAJIG ultimately aims at: fostering research capabilities that might reinforce not only the academies, but also the policy-making process and the relation between the academy and the civil society.

Collaborations

One of the most interesting outcome of the questionnaires is the willingness of all Latin American partners is to use the inputs provided by MAJIG to collaborate not only among them, but also with non-academic important institutions that could: a) use themselves the applied macroeconomic models developed within the universities and thanks to MAJIG; b) give students of the Latin American universities belonging to the consortium the opportunity to work with them (internships, short-contracts, consultancies, etc.). Notably, the non-academic institutions that already expressed their interest in MAJIG are:

1. The Direction of Planning of the Ministry of Economy and Public Finance, plurinational State of Bolivia. The Direction has a strong interest in training its public officials in SFC macroeconomics, with the purpose of improving policy making.
2. The National Department of Planning (Departamento Nacional de Planeación, Republic of Colombia), i.e. the governmental body in charge of preparing medium- to long-term economic policy plans. (Letter of endorsement received already)
3. The private bank “Davivienda”, Colombia. Like other large financial institutions, Davivienda has its own research centre, in charge of studying the national and international macroeconomic evolution as well as making predictions concerning some key financial variables. The interest of a private bank in MAJIG is explained by the fact, already stressed, that the SFC modelling approach puts a great emphasis on financial variables and real-financial interactions.

Complementarities

The totality of respondents believe that MAJIG is coherent with the institutional goals of their academic institutions and complementary to other ongoing projects. To be more precise:

- The Universidad Nacional de Colombia would use MAJIG as a way to consolidate and possibly expand the outcomes arising from a research project based on SFC modelling that is currently ongoing with AFD (Agence Française du Développement). The AFD project does not foresee capacity building activities, whereas this is the core of MAJIG. MAJIG would thus be useful not only in itself, but also as a means to magnify the impact of other projects.
- The Universidad de la Salle already has some similar projects developed by the CIER (Centro de Estudios e Investigaciones Rurales) and other observatories. Whilst these other projects are “similar” in that they are centred on the design of economic policies, they are not based on SFC modelling. MAJIG would then add to the capacity to carry on policy analysis.
- MAJIG is aligned with the institutional development goals 2018-2022 of the Universidad de Cartagena, according to which research results should have social impacts to better respond to local, regional and national needs. As far as social sciences are concerned, the focus must be oriented on how research is translated into policy proposals.
- Both universities from Bolivia - UMSS and UMSA - see MAJIG as a great opportunity to strengthen collaboration with the Direction of Planning of the Ministry of the Economy and Public Finance, since the Direction has a strong interest in training young public officials in SFC macroeconomics.
- As confirmed by the EU delegation on Bolivia, the purpose of the MAJIG project is relevant and in line with the EU objectives of Cooperation in Bolivia. This fits in the Multiannual Indicative Programme 2021-2027 for Bolivia, which is available and consultable here:

https://ec.europa.eu/international-partnerships/where-we-work/bolivia_en.

As confirmed by the delegation, a stronger connection between the field of macroeconomic modelling with policy makers (central government authorities, local authorities, etc) is relevant in Bolivia mainly for issues like climate change, environmental sustainability, inequality, job creation, etc., most especially taking account that the population and housing Census will be developed this year in Bolivia. Similar projects, with special attention to public policy, are not known.

How many beneficiaries? Who?

We previously made reference to “small” research units. This is to be clarified. Very reasonably, most respondents distinguished between direct and indirect beneficiaries of the project. The former are young researchers and/or professors of the LA universities belonging to the consortium that will be directly involved in the set up of the research units and will benefit from the planned training activities. Numbers go from 3 (Universidad Nacional de Colombia, UMSS-Cochabamba) to 5 (UMSA - La Paz, Universidad de Cartagena, Universidad de la Salle). These persons are supposed to take the leadership in the set up of the research units. The latter, the indirect beneficiaries, are those advanced undergraduate students, master students and Ph.D. students that will also participate in the planned training activities of the project and could be encouraged to use SFC-related topics in their dissertations. This could put them in a good position to participate actively in the activities of the research units. Here, numbers go from 10 (Universidad de la Salle, Universidad de Cartagena, UMSS-Cochabamba) to 15 (UMSA-La Paz, Universidad Nacional de Colombia). Needless to say, the group of indirect beneficiaries could be further enlarged in case the evolution of the project-related activities leads to the insertion of specific courses on Macroeconomic Modeling in the general curricula of the LA universities in the consortium. In this respect, the members of the consortium might benefit from the expertise provided by professor Sebastien Valdecantos (Aalborg University), who already designed this kind of courses not only at the graduate, but also at the undergraduate level.

The needs emerging from the questionnaire belong to two categories: a) “internal needs”; 2) “external needs”. Internal needs refer to the purpose of strengthening/expanding the teaching and research capabilities in the field of macroeconomics, whereas external needs refer to the purpose of making each university a more active and influential actor in the policy debate.

Specific objective no.1 is clearly designed to satisfy the internal needs.

Specific objectives n. 2 and 3 are intended to satisfy both internal and external needs. Indeed, the construction of SFC models and the creation/reinforcement of research units will serve both the purpose of providing professors and students with newly available pedagogical tools and opportunities to learn and teach and the purpose of making the LA universities in the consortium key institutions able to design policy proposals, produce forecasts and scenario analysis and, shortly, become reference actors in the production of knowledge at the service of national and local communities.

Finally, specific objective no. 4 clearly wants to satisfy external needs.

The objectives of the project MAJIG are realistic and feasible. This judgement rests on some crucial considerations:

a) whilst all the Latin American universities of the consortium express the need to improve their research and teaching capacities in the specific field of SFC modelling, they do not start from scratch. We already mentioned, as an example, the collaboration between the Universidad Nacional de Colombia and AFD.

On top of this, even in those cases where macroeconomic studies seem to be given a secondary importance, the partners already managed to embark people who already achieved higher education standards in the field (as an example, think of UMSA and its already planned collaboration with two young officials of the Ministry of the Economy of the plurinational State of Bolivia).

b) some of the European professors in the consortium are literally world leading experts in the field of SFC modelling: professor Zezza from University of Cassino, professors Nikiforos from the University of Pavia (seconded staff) and professor Valdecantos from the University of Aalborg. Others are contributors to advanced Keynesian economic theory applied to Latin American countries and have accumulated a long experience in cooperating with and directly working with Latin American universities (professor Missaglia from University of Pavia).

c) maybe even more importantly, several professors and researchers on both the European and Latin American side of the consortium have already collaborated among them (see section 2.2.1 on the set-up of the consortium). MAJIG certainly aims at further developing and making more structured these cooperation activities with the final purpose of improving the research and innovation capacities of the Latin American partners.

d) some partner LA universities already have a good reputation in the field of macroeconomics, others are at the beginning of their evolution in this field. This will make it easier to achieve the project's aims, since the relatively stronger local universities will help fine tune the concrete realisation of the activities.

5. Tailored trainings

In light of the above mentioned needs, both internal and external, we propose to realise four sequential and interrelated courses on macroeconomic modelling- Their common features will be the following:

- A. 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;
- B. emphasis on hands-on and “practical” capabilities and applications. The four proposed courses, indeed, will devote a very significant portion of time to model-building using computer exercises, data analysis, etc., and in any case participants will be actively involved in the construction of the class.
- C. emphasis on some specific issues that respondents identified as key to their research and teaching plans (see above): environmental macro models and multisectoral models
- D. emphasis on sustainability over time of the project. This means that most participants to courses will be 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.

Below, a short description of the four courses and their main contents and objectives.

5.1 Training 1 - Behind SFC models: structuralist macroeconomics and post-keynesian macroeconomics

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

5.2 Training 2 - Theoretical SFC models and data requirement

In the lectures, following a step-by-step approach, different theoretical SFC models (from the “smallest” to the “largest”) will be built together with the participants, using the software E-views and becoming familiar with the computer solution of these models. On top of this, the specific data requirement for each model will be presented and discussed. In the exercise, computer-based sessions, participants will have to modify the previously built models, introduce different assumptions, elaborate on specific, concrete macroeconomic issues using those models, etc. Workshop sessions are practical as well, but based on participants’ motivations and proposals.

Learning Goals

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

Skills

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

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

5.3 Training 3 - Applied SFC modelling

In the lectures, following a step-by-step approach, different SFC models (from the “smallest” to the “largest”) will be built and estimated econometrically using the software Eviews. In this respect, it will be key to have a good grasping of what was learnt during the second MAJIG course. In the exercise and workshop sessions, participants will start building and estimate econometrically a SFC model for their own countries, Bolivia and Colombia.

Learning Goals

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

Skills

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

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

5.4 Training 4 - Stock-Flow Consistent input-output models for the analysis of the low-carbon transition

In the lectures the main concepts and sample models are presented. Exercises present close-ended instructions aimed at fixing a specific concept. Workshop sessions are also practical activities as exercises but are more open-ended and based on participants' motivations.

Learning Goals

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

Skills

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

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

6. Conclusions

The proposed courses constitute the essential tool through which the key MAJIG objectives should be realised. In particular, they are supposed to provide participants with the technical skills needed to build the planned “maquette” models as well as the organisational capabilities required to set up the research units that will be in charge of elaborating and updating over time SFC models for policy analysis and forecasting.

Indeed, Training 1 and Training 2 will be essentially devoted to developing the methodological and analytical skills, whereas Training 3 and Training 4 will concentrate on applications and practical policy analysis. This way, participants will have developed, 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.

Needless to say, policy analysis and forecasting are the fundamental inputs needed to expand the connections between the partner Latin American universities and the external actors more directly in charge of policy making.

To the extent that the research units set up thanks to the project will be able to transform their “maquette” into “true” models for policy-making, this will certainly help the Latin American partner universities to expand their opportunities to sell consultancy services required by both public and private institutions (ex: ministries, central banks, think-tanks, etc.). This way, academic sustainability could go hand-in-hand with financial sustainability.