

Going further... together.
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SFC Workshops
Spring 2013 Dijon

A first step

Since 2000 and Levy Institute working paper 302, the Godley-Lavoie approach to stock-flow macroeconomic modeling has been blossoming. Their initial model was expanded in many ways such as closed economy models with developed banking or financial sectors, or world models with 2 or 3 region/countries. SFC practitioners have piled up knowledge and experience but we feel the approach needs to find a second wind and to overcome the limits that have risen during the diffusion of the methodology.

We propose to organize a series of workshop in 2013, centered on the SFC approach. These gatherings would explore all aspects of the modeling technique: empirics, methodology, theory. Furthermore, the final aim of the series of workshops, to be organized in 2013, is to allow for the renewal of the political economy frame of thought. The goal is ambitious but yet necessary, given the current global crisis and the havoc it implied. The first workshop could take place in Dijon, next spring.

Towards a renewal of the applied heterodox macroeconomic framework?

In the words of one of the authors which most contributed to their rise and diffusion, the SFC modeling approach:

« provides a potential for common ground for all heterodox schools, just like the maximizing representative agent seems to be the standard of mainstream economics. Stock-flow consistency as defined here fulfills what Pasinetti (2005: 841) calls one of the constructive features of the Cambridge School of Keynesian economics - the need for internal consistency, and not only formal rigour. » (Lavoie 2008)

For example, the SFC methodology allows to underline the real-financial nexus via (i) pricing interdependencies (structuralist approach), (ii) innovation and production (Kaleckian and Neo-Schumpeterian approaches), (iii) financial bubbles (Miskian approach), and (iv) the circuitist theory.

However, some of the canonical equations such as portfolio choice or out-of-wealth consumption decision might be problematic. Often, these are seen as standard in the literature and used without assessment of their modeling foundations or of their theoretical implications. Take the “Tobinesque” portfolio equations for example. These equations carry a double weight; (i) empirically, the parameters are difficult to estimate/calibrate, and (ii) analytically, the convergence of the model towards a steady state is very unstable and the model leads to financial bubbles, once the assets prices are endogenous. The combination of these double characteristic force the researcher to either settle with parameters fixed at some arbitrary values allowing for a stable or at least realistic behaviors or to stick with estimated values and hectic behaviors. We believe that the portfolio equations should be analyzed more in depth.

The choice of « buffer » variables, allowing for an ex-post accounting equilibrium has to be considered. Indeed, most SFC models analyzing the current global crisis and its origin are centered on the financial side of the economy. Hence, they need these buffer stocks when modeling wealth distribution decision such as portfolio choices. However, feedbacks between assets and liabilities are often omitted, forcing equilibrium within each part of the balance sheet.

The importance of expectations should also be highlighted. Indeed, SFC models are very sensitive

to expectation formation, particularly for financial assets prices and exchange rates. The modeling of expectations might exacerbate the model instability arising from the portfolio choice equations.

Keeping the same line of thought, the implicit production equation remains fairly crude. The current state of the art should be improved both from the empirical side in order to get closer from a macro-foundation and from the theoretical side via the introduction of Kaldor-Verdoorn effect modeling. Finally, intra- and inter-sectorial rigidities via pricing or output constraints should be added.

Other issue such as the facts that goods and services prices are often endogenously fixed or that interest rates on deposits, loans and above all on obligations remain too rigid should be investigated. Of course, these assumptions are often needed in order to represent the whole financial system and yet have a tractable model. We do not push for more complex models but rather to clarify the modeling choice taken, leading to simple yet realistic models.

Of the interests and the limits of dynamics

SFC models are intrinsically dynamic. Because of its consistency, every monetary flow is recorded as a payment for one sector and a receipt for another sector. These flows will impact end-of period stocks levels, which will then generate next period flows, which then update the stocks, and so on. The long-run dynamics of SFC models are thus composed of a path of short-run period interconnected with each other via the stocks.

The difficulties arising from the models' convergence properties force a groping methodology in order to calibrate each model. Or rather, a “guesstimation” of the parameters, so that the model presents some characteristics such as smoothness, stability or desired behaviors. This arbitrary choice often prevents a deeper reflexion on each parameter's impact on the economy at hand. In this perspective, one might find an answer via analytical solutions of static and dynamic equilibriums. However, this implies an increasing complexity and ever-rising computational time. This highlights the need of a strong methodological framework.

What are the software to use? Eviews allowed the large diffusion of SFC models thanks to its flexibility and thanks to the website sfc-model.net. Indeed, the website offers all the models from the reference textbook of Goldey and Lavoie (2007), as well as from numerous papers. However, because Eviews is not a programming software and because it is not freely available, some limits to its use are appearing. What other tools could provide a better solution? Matlab and Mathematica are not open-source, R does not have a numerical solver,...

To what end? On the one hand, numerical resolution allows for quick simulations but its results remain limited to the scenario analyzed. On the other hand, analytical resolution allows for a global understanding of the model but at the cost of time. Is this worth the struggle? Isn't there a risk of gargantuan modeling, as exposed by L. Taylor about orthodox modeling?

What about microeconomic?

An alternative to mainstream macroeconomic models may be found in the introduction of individual agents with bounded rationality within the SFC framework. Indeed, mainstream « micro-founded » models present results which seem far astray from reality. However, the struggle with orthodox economy should not remain at the macroeconomic level. This is why agent-based (AB) models with procedural rationality could offer a new wave of elegant models, filling somehow the gap between the macro and micro levels. This has been recognized by INET, which recently started a work group on the merging of SFC and AB models.

Plan for action

The workshop would be divided in three sessions. The first gathering would be dedicated to a definition of the state of the art and, depending on the logistics, would take place in Dijon in spring 2013. The University of Limerick would organize the second meeting, addressing empirical aspects, in the summer of 2013. Finally, the workshop would conclude in Berlin, during the FMM conference, by discussing theoretical matters as well as the way forward.

The “state of the art” meeting would list the subjects already addressed within an SFC framework. The reasons lying behind the model-topic choices should be investigated. The SFC methodology has been famously used by Godley to analyze macroeconomic financial imbalances and a large share of the SFC literature has concentrated on finance-related subjects such as financialization, over-indebtedness, etc. But other matters such as open-economies-related issues or entrepreneurial issues have also been explored. The goal of the meeting is thus to uncover the spectrum of SFC usage and to identify the comparative advantages of the SFC methodology without forgetting to note the limits and difficulties arising from such a methodological choice.

One should not to underestimate the importance of political advices. Indeed, the significance of the predictions that a model can make is essential, particularly in the context of the present intellectual competition between the various schools of thoughts. In that regard, the ability of the Levy Institute to forecast the outcome of various scenarios, based on their SFC model is to be noted. The necessity of such a model for Europe is obvious. The following questions need to find an answer: How to econometrically estimate an SFC model that can then be used for forecasting? What econometric methodologies allow for sound estimation of a set of simultaneous equations? Is it doable? These questions and others will be addressed during the second meeting, to be held in Limerick.

The conclusion of the workshop, depending on the results obtained during the first two venues, could be organized during the FMM conference in Berlin with specific sessions targeted for SFC audience. This would allow to expose the results of the previous two meetings and to call for specific actions to be taken. The large audience the Berlin conference attract could allow for tempting even more researcher to use the SFC framework. A special attention should be drawn on undergraduate students. Indeed, we believe the SFC framework to be particularly adapted for teaching and didactics. Organizing a session for undergrads could be of great help in order to push for the use of SFC in academic teaching.

Deliverables

The obvious outcome of this series of workshop is that of European SFC practitioners getting together and working jointly. We believe this will stimulate further the use of SFC models. A second goal is to develop a simple methodology for the use of the SFC framework as a didactical tool. Finally, a special issue in a journal should be dedicated to the articles produced as a result of the interactions emulated during the series of workshops.