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Monetary Circuit Theory, Stock-Flow Consistent Modeling and Parguez's Analysis

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ABSTRACT

Stock-flow consistent (SFC) modeling goes far beyond simple formal tools. It rests on strong post-Keynesian hypotheses and proposes a new conceptual framework for formalization. This being said, if its affiliation with post-Keynesianism is obvious, SFC models are in line with many elements of the monetary circuit theory (MCT), as developed notably by Alain Parguez. Indeed, MCT has deeply studied macroeconomics and the link between money and production. More precisely, both SFC models and MCT offer an analysis in terms of national accounting, in which money is endogenized through the financing of the economy, and more precisely through the financing of production. Even if MCT has lost its vigor, its fundamental principles are still present through the SFC modeling.

KEYWORDS

Circuit; macroeconomics; Parguez; SFC modeling

JEL CLASSIFICATIONS

B31; B59; E12; E51

Introduction

The post-Keynesian school is constantly renewing itself and tackling new issues. In under 15 years, post-Keynesian economists have constructed and developed their own stock-flow consistent models (SFC), which are widely used in the literature. SFC models both contrast with neoclassical modeling and represent a genuinely new tool for quantitative analysis, with their use proliferating even outside the field of post-Keynesian economics, as the Bank of England and other central banks have started to use them. Over time post-Keynesian authors have developed several research programs (Lavoie 2022, 33) and are now studying modeling or ecological economics, in particular. These developments reveal that these authors use a great variety of objects, traditions and methods. If the works of J.M. Keynes remain a cornerstone for the post-Keynesian school, there are multiple interpretations of his work; and this is also the case for authors such as Kaldor, Kalecki, Robinson and Minsky (Berr, Monvoisin, and Ponsot 2018). Therefore, historians of post-Keynesian thought who have tried to sketch its contours and currents do not paint a uniform picture. For instance. Hamouda and Harcourt (1988) do not mention the Institutionalists, Arestis and Sawyer (1993) focus on Robinson, Arestis (1996) focuses on the Institutionalists and King (2015) emphasizes the importance of the followers of Minsky.

In contrast, they make scant mention of Monetary Circuit Theory (MCT). Having been initially emerged in France and Italy in the late 1970s, MCT seemed to develop independently of other strains of post-Keynesianism. It was structured around three main leaders: Bernard Schmitt in Dijon, Frédéric Poulon in Bordeaux and Alain Parguez in Paris and Besançon. Its main research themes differed from the rest of the Post-Keynesian School. In its early days, for example, MCT focused on profit-related issues or on the identity between savings and

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investment, whereas post-Keynesians were interested in theories of unemployment or the firm. Here, Alain Parguez played a fundamental role. As circuit theory was being built up, he regularly visited North America and, more than any other Circuitist, was keen to build bridges with post-Keynesians, to the point of considering himself a Post-Keynesian. Today, there is no longer any doubt that Circuitists adhere to post-Keynesian theory, as the two are rapidly converging.

Furthermore, it is even possible to establish that in terms of method and hypotheses there is a rapprochement between MCT and SFC models. At first sight, this seems rather counter-intuitive: MCT is not based on empiricism and reached its peak during the 1980s and 1990s. However, Parguez and some other Circuitists were constantly engaged with economic history and with stylized facts of the present.

Yet points of convergence between the two are more numerous than it seems at first sight, and, surprisingly, they include fundamental elements of both approaches. A. Parguez had been to Ottawa on numerous occasions and had long been in dialogue with M. Lavoie.[1] We examine the assumptions of SFC modeling that are often taken for granted, but which are based on strong theoretical and methodological choices that have given rise to major–but sometimes forgotten–debates. Reflecting on Alain Parguez's contributions has a twofold interest. On the one hand, it allows us to see the links between MCT and SFC modeling. On the other, Parguez's evolution underline the theoretical leaps taken by the MCT and the SFC models.

We will see that what both approaches have in common is that (1) they are based on the lessons of national accounting and that (2) MCT offers a solid foundation for SFC models of endogenous money and the financing of the economy, and (3) the objective of this financing. In concluding, we will, in particular, show how Parguez's views on the investment/savings identity coincide with and illuminate SFC, etc.

National Accounting as a Common Foundation[2]

For the Circuitists like Parguez, understanding how processes in the economy connected to each other was the cornerstone of their theory. Of course, they were hardly the first to attempt this. Over time the approach occupied many economists. This was particularly true of the Physiocratic school, which had a strong influence in France in the second half of the 18th century, largely thanks to François Quesnay, who was the first to present an overview of the whole economic system in his major book, *Tableau économique* (1758). Consonant with the materialist ideas that tended to prevail in this era, Quesnay believed in a natural order. For him, society and the economy function like a living organism and both obey natural rules. The representation of the economy in the form of a circulation, a circuit, might have been suggested to Quesnay, who was a physician at the court of King Louis XV, by an analogy with the circulation of blood. The schema of the *Economic Table* was admired by authors as different as Smith, Marx and Schumpeter, and was a precursor of national accounting. Here, we could more intensely explore the deep links between Circuitists and Marxist or Schumpeterian traditions, but this is not our purpose. However, Parguez's answer to an interview in an academic review is an illuminating starting point for our argument (Kaboub 2000):

> ***Oeconomicus***: What is the best book you have ever read in economics?
>
> ***Parguez***: The best book … what I would say could surprise someone … I would say Marx, *Das Kapital*.

However, it was during the interwar period that national accounting would develop as a measurement of a national economy. As such, the work of Colin Clark (1932) and Simon Kuznets

[1]For example, Parguez was a visiting professor at the University of Ottawa in the fall of 1981, even though Lavoie had been there for 2 years.

[2]This paragraph owes much to Vanoli (2002).

(1941), in particular, led to considerable improvements in the measurement of national income. Influenced by both the crisis of 1929 and the emergence of Keynesian macroeconomics in the 1930s, which implied the extension of the role of the State vis-à-vis the economy, analysis increasingly focused on the study of flows rather than on that of assets and wealth, and thus on stocks. In the United States, Morris Copeland (1932, 1935) showed the advantages that would result from formulating the problems of estimating national income in accounting terms through the system of double-entry accounts.

Such an accounting system was developed in the UK, the pioneer country in this field, in the early years of the Second World War. Although Keynes, who was concerned about inflation, had started to think about this method and published *How to Pay for the War* (Keynes 1940), the White Paper that James Meade and Richard Stone prepared for the Chancellor of the Exchequer in 1941 is considered to be the first example of national accounts, notwithstanding all the earlier sketches that belong to the prehistory of national accounting (Meade and Stone 1941). Stone's work (1947) was to serve as the basis for the international standardization that subsequently took place under the egis of the UN.

In France, the construction of a true national accounting system began in 1945, but it was not until 1950, under the egis of Claude Gruson and the Service des Études Économiques et Financières (SEEF), which he headed in the Treasury Department, that national accounting went beyond its vocation of collecting statistics and became an autonomous, logical and rigorous science.[3] For the French, who thus distinguished themselves from Stone's approach, the main objective was not to define and calculate aggregates but to provide an instrument for drawing up economic budgets and making short and medium-term economic projections. The SEEF, which produced the *Tableau Économique d'Ensemble* (TEE; Overall Economic Table) from 1955 onwards, and then the l'Institut National de la Statistique et des Études Économiques (INSEE, National Institute of Statistics and Economic Studies) from 1962 onwards, brought French national accounting to a high level of development.

The SEEF very quickly found itself classified as left wing. Although it included Communists, it also brought together Keynesians such as Jean Denizet. On his part, Claude Gruson contested the ability of the market to anticipate and solve long-term economic problems and spoke out in favor of economic planning.[4] Jean Denizet sums up the state of mind that prevailed at that time within the SEEF: 'We were convinced that with national accounting we had found the means of transforming the world, or at least the French economy, in the direction of our ideological preferences' (quoted by Vanoli 2002, 545, who specifies that these ideological preferences were varied).

But, as a result of the initiatives of international institutions, efforts were made to develop standardized systems of national accounts in order to facilitate international comparisons in the future. In these institutions, the Anglo-American countries, perhaps because of their advanced use of national accounting, played a dominant role. Yet, seeking to go its own way and having one of the most advanced systems of national accounting, France was never able to make its point of view prevail and ended up choosing, from the end of the 1960s onwards, the path of standardization, that is, of alignment with the international rules of national accounting enacted by the UN.

Therefore, it is not surprising that the theory of the circuit developed mainly in France, a country where national accounting is still widely taught in universities. In this respect, the TEE provides a detailed picture of the national economy. Like national accounting, the French MCT

[3]François Perroux (1991) also played an important role in the 1940s by publicizing foreign social accounting work in France and by conducting in-depth reflections on its concepts.

[4]However, Gruson's positions, which generated tensions and led to his departure from the administration in 1966, should not overshadow the success of the SEEF and the development of the INSEE, which he directed from 1961 to 1966 (Vanoli 2002, 544).

rests on the categorization of agents, the hierarchization of economic and financial flows, and accounting identities.[5] Parguez was a student just after the implementation of national accounting,[6] which represented a major part of France's new structures. For the record, Parguez never hesitated to quote F. Perroux in his own work (1981a). For their part, Godley and Lavoie (2012), whose work is at the origin of the development of SFC modeling and is the reference on the subject, acknowledge the influence that Morris Copeland and Jean Denizet – a reference for Parguez in his first article![7] – exerted on their theories. Based on the work of Richard Stone, they sought to integrate monetary and financial flows into the national accounts presented by the UN in the 1950s, and thus to put an end to the dichotomy between the real and monetary spheres of neoclassical economics (Godley and Lavoie 2012, 23–24).[8]

National accounting provides both circuit theory and SFC models with a framework that is compatible with the hierarchization of economic agents. In line with Gruson's vision, circuit theory proposes a tool, namely the circuit, which makes it possible to free oneself from the control of the market. As Poulon (1988, 12) reminds us, it is not a matter of denying the market as such, but of rejecting the Walrasian vision according to which the economy consists of a set of interdependent markets. Parguez dedicated several articles to this point (Parguez 1980, 1981a, 1981b, 1989): Hayek's criticism was recurrent in his writings, as is that of the market, and very early on he reaffirmed how fundamental Keynes's circuit approach is.

> [We had already explored certain issues] in our work on circuit theory, demonstrating that the theory of the structure of production finds its true meaning only in the Keynesian theory of the circuit […]. The heart of the *General Theory* is the theory of income in chapters 6 and 7. Here, Keynes reasons not in terms of markets, but of circuit.[9] (Parguez 1981a, 172–175)

> To believe in and impose austerity is to be enslaved to a metaphysical vision of the Market and Competition. The Market is the place where the laws of the circuit are suspended.[10] (Parguez 1989, 76)

This interdependence presupposes the absence of a hierarchy among markets, and therefore among the economic agents who operate in them. On the contrary, circuit analysis postulates that there is a hierarchy among economic agents and the operations they carry out, which makes it incompatible with an approach in terms of the market. Thus, the circuit paradigm opposes the market paradigm and offers a macroeconomic tool that can be used in heterodox approaches,[11] and is compatible with the work of the SEEF during the 1950s and 1960s. This tool is also used in SFC modeling used by Godley and Lavoie, following the recommendations of Tobin (1982). Tobin's acceptance speech on receiving the Nobel Prize, he explained how his work differed from that of neoclassical economics. Indeed, Lavoie, Monvoisin, and Ponsot (2021, 46) recall Tobin's statement:

> (i) any model must include a multiplicity of sectors and assets with their distinct rates of return; (ii) monetary and financial operations, especially those conducted by the central bank, as well as the behavior of banks, must be modeled; (iii) stocks and their associated flows must be fully integrated in the model, and their accounting must be done in a coherent manner; (iv) there can be no 'black hole', every flow must

[5]For more details on the foundations of MCT see Berr and Monvoisin (2023).

[6]He defended his PhD dissertation in 1973.

[7]"J. Denizet's analysis is particularly penetrating" (Parguez 1970, 136; our translation).

[8]Godley bases his analysis on what he calls the three-sector financial balances model, which can be represented as follows (Lavoie 2022: 281):

$(S - I) = (G - T) + (X - M)$ or $(S - I) + (T - G) + (M - X) = 0$, when S is private savings; I is private investment; G is public expenditure; T is tax revenues; X is exports and M is imports.

However, Godley's 'discovery' of this relationship is not really a discovery, since it is the basis of the TEE developed in France (Berr and Monvoisin 2023). See also the critical analysis of Godley made by Taylor (2008).

[9]Our translation.

[10]Our translation.

[11]Barrère (1990, 20) reminds us that as early as 1979, in a book entitled *De l'imperfection en économie*, Henri Guitton wondered whether the concept of the circuit was not destined to take the place of the concept of the market.

> come from somewhere and go somewhere. All budgetary and addition constraints must be respected, both in results and in behavior.[12]

Although they adhere to a circuitist logic, these dynamic models are not 'simple models of the national accounting circuit, they also incorporate markets, behaviors, reaction functions, economic policies, and portfolio trade-offs'[13] (Le Héron 2018, 261). Early in the 1980s, Parguez emphasized these fundamental components of the circuit on the occasion of his review of the neoclassical theory: "None of Keynes's circuit properties can appear in these pseudo-circuits [Benassy, Malinvaud …]. If we follow A. Barrère's logic, there is no place in these pseudo-circuits for income, macroeconomic profit or expectations" (Parguez 1981b, 181). In this article in particular, he saw behaviors (i.e., expectations), the circuit of the capital (including savings) and economic policies as forming a whole.

They lead to the development of matrix accounting combining a stock matrix, consisting of sectoral balance sheets, with a transaction flow matrix that is the equivalent of the TEE. Thus, Godley considers that the combination of the inventory matrix and the matrix of flows of transactions constitutes the skeleton from which it is possible to model the monetary economies of production, which is the basis of the post-Keynesian economy.

SFC Models, Endogenous Money and Financing the Economy: Debates in the Late 20th Century

The SFC models constitute part of post-Keynesian theories of the monetary economy of production. In this framework, the principle of effective demand implies that monetary phenomena can be understood by linking them to economic dynamics, notably through the endogeneity of money. But the endogeneity of money can be fully understood only if its functioning and the financing of the economy are explained. However, the reference to Keynes is complex because the places where he analyzes them are scattered and diverse in his work. Nevertheless, SFC modeling relies on the distinction between initial and final finance that seems likely to provide a relevant analysis of money creation and financing the economy (Zezza 2012, 155; Caverzasi and Godin 2015; Sawyer and Passarella 2017).[14] The work by Godley and Lavoie (2012), which truly opens out the field to SFC modeling, refers explicitly to MCT using the notions of initial and final financing:

> The transactions flow matrix can really help us to understand how production is being financed at the initial finance state, that is at the beginning of the production period, before households have decided on what they will do with their newly acquired income or their newly acquired savings. The transactions flow matrix sets the monetary circuit – about which so much has been said by the French and Italian post-Keynesian school, the so-called circuitistes – within a comprehensive accounting framework. (Godley and Lavoie 2012, 47)

Yet, the corollary of the SFC model, the *finance motive* introduced by Keynes in his articles of 1937–1939, was bitterly debated within the post-Keynesian school. Here, Parguez's position is particularly interesting and representative of this debate, as his views evolved over time. The SFC theorists did not choose a trivial position because the stakes were high: it explained the causes of money creation and the consequences of the latter on the economic system. However, MCT had animated these debates 20 years earlier than SFC modeling and proposed the most advanced analysis of the finance motive at the time. In France, Parguez and Schmitt were particularly interested in the question of monetary endogeneity, but it was Parguez (1981b, 1982, 1996; Parguez

[12]Our translation.
[13]Our translation.
[14]It should be noted that a number of these authors, who are specialists in SFC modelling, were students or close associates of Augusto Graziani.

and Seccareccia 2000) who established the broadest dialogue with Post-Keynesian economists through several articles dealing with money. And it is precisely this analysis that we rediscover in the SFC models.

Let us quickly review the elements of the debates surrounding the finance motive in order to clarify the need to distinguish between initial and final financing. Between 1937 and 1939, Keynes wrote four articles aimed at extending the *General Theory*, which led him to clarify his thinking in three areas: the theory of interest, the theory of money demand for money and the theory of economic financing (Keynes 1937a, 1937b, 1938, 1939).

The finance motive came to fill the theoretical void over the production and definition of money. Indeed, the debates raised by these four articles demonstrate the conceptual richness that lies in his redefinition of the demand for money and, by extension, the supply of money. If Keynes wished to defend his 1936 work, his response to the criticism to the *General Theory* – the finance motive – relied on the introduction of additional notions. In fact, while the finance motive seems to have been added onto the other three motives for the demand for money, namely transactions, precautionary and speculative motive, his finance motive comes from another sphere of his theory, as it is related to entrepreneurs and makes explicit the part of macroeconomic theory that concerns investment, financing and, therefore, the creation of income:

> It was in order to clarify his position on the problem of the relationship between investment and savings that Keynes introduced the problem of financing. For an investment to be made … , the investor must be financed, and the financing he needs is not financing in terms of savings, but financing in terms of liquidity.[15] (Graziani 1985, 159)

> Such a Monetary Circuit perfectly fits the major characteristics of the Monetary Production economy Keynes had in mind. (Parguez 1996, 158)

All post-Keynesians agree on the intervention of the finance motive in the mechanism of production implementation. Keynes links investment, credit and the demand for money by firms through banks: "'Finance' and 'commitments to finance' are mere credit and debit book entries, which allow entrepreneurs to go ahead with assurance" (Keynes 1937a, 247). We can identify here in his very first article on finance the controversial issues that would animate post-Keynesians and Circuitists for several decades; namely:

- the destination of the finance motive,
- the definition of money demand and the distinction between stock and flow.

Now, we turn to the Parguez's positions on these two issues to show the elements of the debate and how the SFC model fits into a more specifically Circuitist reading.

Financing Production versus Financing Investment?

All Circuitist and Post-Keynesian authors implicitly agree that finance does not concern the loans taken out by households: the term is limited to loans taken out by firms. But it is the destination of the finance motive that is the theoretical issue: either the demand for liquidity finances expenditures of entrepreneurs in investment goods, or it finances all production, including expenditures in the consumer goods sector.

Thus, there were two competing interpretations of the finance motive: either it applies to financing investments; a position defended by post-Keynesians, or it applies to financing production; a position defended by many Circuitists and, later, by proponents of SFC modeling, which

[15]Our translation.

allows them to distinguish between initial and final financing. Here, this theoretical choice will be a strong one, since it brings into play fundamental concepts in understanding the monetary economy of production.

> To date, we can discern two main currents of interpretation of the finance motive. Some see finance as an additional creation of liquidity, intended to finance an additional investment for growth. The others see "finance" as the explanatory basis for the initial financing of the economy.[16] (Bailly 1992, 106)

For the most part, this distinction is true. If B. Moore (1988) held a more nuanced position for a post-Keynesian, Parguez had an even more elusive one for a Circuitist; he himself endorsed the different points of view … to arrive at the Circuitist point of view. Let's go back to the debate and through the evolution of Parguez to enlighten the concepts involved.

Post-Keynesians, who were essentially Anglo-Americans, first interpreted Keynes's finance motive as the activity of financing an investment. Kregel (1986, 93) writes: 'the finance motive concerns the interval or intermediate period between the investment decision and the investment expenditure'. However, while post-Keynesians defend or defended this position,[17] for the most part they qualified and refined their analysis. In fact, when Keynes linked the finance motive to investment, he always presented finance as the destination of financing a new investment. Asimakopulos[18] (1983, 227) notes that 'Keynes argues (as did Kalecki) that a flow of new finance is only required when the rate of investment is to be increased'. For Davidson (1986, 101), 'this issue … gives me the opportunity to clarify my view of the role of the banking system whose function it is to create additional short-term finance whenever entrepreneurs wish to increase the flow of real investment'. Likewise, in the early 1980s, Parguez remained vague and suggested that money is created for any new investment. Indeed, he did assert that "to deny money is to deny the necessity of firms" (Parguez 1984, 90), but he insisted above all on the fact that money is the counterpart of a debt, a counterpart in firms' liabilities and a bet on the future on the part of firms (Parguez 1984, 98–102). Here, what seems essential is new investments.

Nevertheless, Keynes's thinking evolved during the writing of the first two articles, and he later referred to production. Subsequently, many authors saw the finance motive as a way to finance additional production. Wells (1981, 586) points out that "the demand for finance (in Keynes' sense) is positive only when the economy is growing". This point of view is widely shared by post-Keynesians and is part of the same problematic as that which links finance to the financing of investment. Overall, these interpretations of the finance motive are located in discussions of a growing economy in which finance replaces savings to finance firms and can be likened to simple lines of credit. If we ask about financing the rest of the production, firms call on their transaction balances – however, savings are excluded.

The last interpretation of the finance motive, put forward by MCT, broke radically with the previous ones and gave rise to long debates between post-Keynesians and Circuitists. Production as a whole is accomplished thanks to finance because 'investment finance in this sense is, of course, only a special case of the finance required by any productive process' (Keynes 1937a, 247). This remark is rich in theoretical implications. Indeed, Keynes (1937b, 667) states that 'if the liquidity-preferences of the public (as distinct from the entrepreneurial investors) and of the banks are unchanged, an excess in the finance required by current ex-ante output … over the finance released by current ex-post output will lead to a rise in the rate of interest'.

The authors who adopt this point of view distinguish between investment, which can be assimilated to the purchase of goods–usually capital goods–and production, which can be assimilated to production costs, that is, ultimately to wages. Thus, thanks to Graziani, Circuitists distinguish financing production as the initial financing of the economy, which gives rise to monetary

[16]Our translation.
[17]Like Davidson (1972) or Barrère (1974, 396), who subsequently changed their opinions.
[18]However, his position on savings and finance was more ambiguous and gave rise to much debate.

creation, from the financing of investment, the final financing: 'Confusion persists between … problems mentioned at the outset of initial and final financement [,] the first being the problem of prior finance needed for any kind of production (the problem Keynes was trying to analyze by introducing his 'finance motive')" (Graziani 1987, 36). So, while Parguez said little about the destination of finance in 1984, he fully endorsed Graziani's point of view two or three years later: "Augusto Graziani deduces a definitive interpretation of Keynes's Finance Motive" (Parguez 1987, 4). For Circuitists, this will never again be a debate, but one of the foundations of their monetary theory.

Post-Keynesians are less categorical. While the method used to demonstrate the endogeneity of money remains the same, they place less emphasis on the macroeconomic aspect of the analysis. Rather, MCT, like SFC models,[19] emphasizes the link between money and output by explaining the financing of the latter.

> While firms generally hold financial assets that allow them to meet their regular monetary obligations, several firms rely on bank loans to start production. This is called 'initial' finance […]. The logic of the monetary circuit has been well explained by Godley himself, in his tribute to Augusto Graziani. (Lavoie 2022, 290)

The theoretical options are central. While Circuitists have established the links between monetary creation and economic dynamics, SFC modeling has developed an approach as a means of observing and measuring the impact of these links.

At the End, SFC and Parguez Facing the Traditional Question of Investment and Savings …

So, the convergences between Parguez, Circuitists and the SFC modeling are deeper than they seem. More than any other circuitist, Alain Parguez wrote extensively on savings and investment. It is even a long-term story. His PhD. thesis and his early works (1975, 1977) – the last one was entitled "I [equals] S or Mysteries of Savings"! – are devoted to the dynamics linking the two variables. The circuit approach attempts to demonstrate the concomitance between money and economic dynamics. Every aspect of monetary theory is justified by economic theory; every aspect of monetary theory justifies economic theory. The concepts of initial and final financing imply the identity of investment and saving and confirm their validity. Embracing Keynes' statement, Parguez argued that: "I = S is always true! S appears to be equal to investment expenditure. S cannot be different from I without denying the laws of the circuit." (Parguez 1986, 27–28).

For these authors, the identity between investment and savings implies that adjustments are impossible, unlike the logic of equilibrium. Macroeconomic savings are made up of household savings and firms' surpluses, i.e., the financing capacity of households and the ability to finance investment internally – their "profit". The authors explicitly refer to the principle of identity between I and S, as presented by Keynes in the *General Theory*.[20] In a closed economy, thanks to counterbalances between flows from different sectors, the total amounts deposited in banks cannot vary; banks simply act as financial intermediaries between investment and savings.

For his part, Godley developed the accounting identities mentioned above. As Le Héron stresses (Le Héron 2018, 266): "The share hoarded by households in the form of bank deposits (ΔM) is equal to the bank financing requirement of firms (ΔL)."

[19]For Lavoie (1987, 90), the post-Keynesian interpretation of the finance motive is erroneous. This fundamental error distinguishes post-Keynesians from Circuitists.

[20]"The reconciliation of the identity between saving and investment with the apparent 'free-will' of the individual to save what he chooses irrespective of what he or others may be investing, essentially depends on saving being, like spending, a two-sided affair" (Keynes 1936, 84).

As the Circuitists before, the SFC modeling stresses radical arguments about the investment and saving process. It deals with issues of financing and money, through money creation and the determination of effective demand. Moreover, it is able to develop an operational tool which rests on deep and complex variables. These latter were at the core of the MCT; now, they are the basis of the SFC modeling.

Conclusion

SFC modeling has become widely accepted as an empirical method among post-Keynesians. Nevertheless, some of its principles and assumptions are close to a theory that has lost its audience, the MCT, of which Parguez was one of the most influentual promoters.

To start with, as it was constructed in France, MCT was largely influenced by developments in national accounting. The categorization of agents, the recording of economic and financial flows and the hierarchy that exists among them are all strong and specific assumptions of this school of thought and are also found in the SFC model through its economic matrix and its fourfold entry of transactions. This is also what makes it original.

The debate about the finance motive allows us to grasp the scope of the theoretical choices made in the SFC model, involving notions of initial and final financing. Here again, MCT stood out for its strong position consisting in linking money creation to production and not to investment.

Finally, the raison d'être of SFC models, which is to account for flows and stocks, is not unrelated to the strong position adopted by MCT, which, by distinguishing between flows and stocks, allows it to account for all the links between money, production and the economy as a whole.

While SFC modeling continues to explore new economic dimensions and to gain in sophistication, it is worth recalling that some of its fundamental principles stem from an older macroeconomic analysis, that of the circuit. Although the latter reached its apogee at the end of the 20th century, the questions that Parguez and the Circuitists addressed and the answers they provided are still relevant today.

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