

*Sraffa, Money and Distribution: a reply to Velupillai*

Ragupathy Venkatachalam\*

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Stefano Zambelli†

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\*Institute of Management Studies, Goldsmiths, University of London, New Cross, London SE146PS, UK

†Dipartimento di Economia e Management, Università di Trento; via Inama, 5, 38122 Trento, Italy; E-mail: stefano.zambelli@unitn.it

Vela Velupillai has provided thoughtful comments on our piece and this allows us to provide some clarifications that may be necessary. Velupillai writes:

I understood the main theme to be that Sraffa's earlier work in money, banking, returns-to-scale, all under some kind of equilibrium condition, is one with the propositions in **PCMC**. This main theme is due to his – Sraffa's – increasing awareness of 'the insufficiency of market forces to determine *values*'.

Based on this, he seems to interpret our position as one that characterises Sraffa's research program as being *monolithic*. Such an interpretation would be incorrect and hence we want to clarify this further to avoid confusion. First, we argue that Sraffa's research contributions are coherent and that his views on money are not necessarily incompatible with that of PCMC. We do not, however, make a much stronger claim that it is *monolithic*. Second, the only equilibrium notion that we attribute to Sraffa (from his early work onwards) is the idea of accounting or bookkeeping equilibrium.<sup>1</sup> The continuing thread that we trace across his body of work does not have any reliance on equilibrium. We do not imply at any point that Sraffa assumed *some kind of equilibrium condition*, except for the accounting equilibrium. Third, Sraffa's production prices or self-replacing prices are accounting equilibrium prices, i.e., prices for which the quantities sold multiplied by the prices (Revenues) are equal to the quantities bought multiplied by the prices (Expenditures) plus what is left or residual (Profits or Losses, which are Revenues minus Expenditures).

The prices considered by Sraffa, in PCMC and in the preparatory work<sup>2</sup>, are never actual or market prices. Instead, they are virtual (uniform) prices which, if realized during the annual market, would allow the system to be in a self-replacing state. This seems to be the *thought/imaginary experiment* that Sraffa seems to conduct for a thorough critique of economic theory. However, it is not Sraffa's theory of distribution, as Bharadwaj (1963, p.1450, quoted in our chapter) has elegantly summarised.

When we attempt to relax or modify some of the assumptions of PCMC, we have not used any notion of equilibrium, except that of the bookkeeping or accounting equilibrium and search for the prices that would guarantee it. In the Appendix B and in Venkatachalam and Zambelli (2020), we conduct a thought experiment where we search for the prices and the nature of credit and debt contracts that would allow the system to remain in the self-replacing state. We believe

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<sup>1</sup>In our remarks concerning Keynes and Sraffa's works during the early 1920s on the monetary theory of their time, we do not imply that they approved Fisher's (or even that of Wicksell, or Hayek) version of the quantity theory of money. We emphasise that they both did, inside that framework, use the quantity theory to speculate on the relationship, for example, between prices and distribution.

<sup>2</sup>We both, as well as many others, have consulted Sraffa's archives, which are now available online. The material found in the archives confirms Sraffa's statement that

[...] the central propositions [of PCMC] had taken shape in the late 1920's [...] (PCMC,vi)

This and the archival material are evidence in support of our view that Sraffa's research is to be seen as a coherent (although surely not monolithic!) whole.

that this would be coherent with Sraffa's method of investigation, although our goals may be different.

PCMC, as we have stressed in our contribution, is a *Prelude to a Critique of Economic Theory*. This is often acknowledged by the scholars working with PCMC, but very few take it as such. The major critique, which is much more than a 'Prelude', is the impossibility of computing the self-replacing prices based solely on information concerning the methods of production.

Once the major critique concerning *indeterminacy* has been put forward, Sraffa continues by considering the imaginary case in which one of the distributive variables  $r$  (or the wage rate  $w$ ) is exogenously given and prices are computed as a function of the distributive variable. This critique is strong and it is based on the fact that as the profit rate changes, prices may not change monotonically (PCMC, p.38, Fig. 3)<sup>3</sup> and this allows him to conclude that:

The reversal in the direction of the movement of relative prices, in the face of unchanged methods of production, cannot be reconciled with *any* notion of capital as a measurable quantity independent of distribution and prices (PCMC, p. 38).

Supported by textual evidence, we think that Sraffa's view or research program, from the beginning of the 1920's to 1960, is a coherent whole. It *concerns the insufficiency of economic mechanisms or market forces to exclusively determine values (prices, profit rates and wage rates)*. His contributions are all critical of the standard notions of equilibrium and we wholeheartedly embrace this.

As we have emphasised in our contribution (see. p.15), non-uniform rate of profits, money or notions of credit or debt are not *necessary* for Sraffa's prelude to a critique in PCMC. However, this does *not* imply that there is no place for them in Sraffa's system or that it is illegitimate to introduce them. We argue that there is such a scope and that this will open up new avenues for research.

**We take note of Velupillai's difficulties in giving up the Sraffian assumption of the uniform**

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<sup>3</sup>In passing, we conjecture that this might have been the reason why Sraffa did not like or approve of Ch. 17 of the *General Theory*. Keynes (1936, Ch. 17, §II and §III ) develops an argument that there would be a 'natural' tendency for the own rates of interest of commodities to converge towards the own rate of interest of money:

Thus with other commodities left to themselves, 'natural forces,' i.e. the ordinary forces of the market, would tend to bring their rate of interest down until the emergence of full employment had brought about for commodities generally the inelasticity of supply which we have postulated as a normal characteristic of money (Keynes, 1936, Ch. 17, §III, p. 235)

According to Keynes, full employment would not be reached, and hence the 'natural forces' of the markets would not fully operate, because money has a higher liquidity premium with respect to the carrying costs than any other commodity. Keynes does not challenge or consider the direction of motion of prices. On the contrary, Sraffa is clearly concerned with this and argues that when the distribution changes the prices could change in all different directions (Lutz and Hague, 1961, see Sraffa's remark, p. 325). Even when the system is made determinate by assuming uniform rate of profits (or the wage rate), prices could move in different directions and consequently, the commodity own rates of interest could also do so.

The similarity of arguments in Garegnani's letter to Sraffa (see our chapter pp. 8-9), with those of the converging mechanisms described by Keynes in Ch. 17 is striking. By *analogy and induction*, it may be reasonable to suppose that Sraffa's response to Keynes' Ch. 17 would be similar to that of his response for Garegnani's *justification*.

*rates of profit*. However, we have difficulties in understanding the connection between the uniform rates of profits assumption and Velupillai's view that "*PCMC [is] dealing with an economic system in the eternal-run of non-equilibrium configurations*". We are sure that he is not suggesting that the rules of accounting are broken, because this would dismantle PCMC. Sraffa has shown that the system of equations in PCMC is indeterminate and this could be seen as a *non-equilibrium* configuration. If this is what Velupillai means, we are in complete agreement, however, with the difference that we do not find it difficult to give up the assumption of uniform profit rates. The system remains indeterminate even when the uniform rate of profits assumption is dropped.

We are indeed sympathetic to the idea that an economic system ought to be studied without the shackles of equilibrium and as *non-equilibrium configurations*. In fact, we believe that our work is a research agenda in this direction. We are also convinced that the constructive and algorithmic method, one that Velupillai has advanced over the years, is a promising way to achieve this. We attempt to do so by combining constructive methods, Sraffa's core insights and by removing simplifying assumptions which we do not consider to be essential in PCMC and by adding other elements.

## References

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