Review Article

Open Access

The Effect of Propensity to Savings on Rate of Profit

Mario de Marchi

CNR-IRCRES, National Research Council Institute for Research on Sustainable Economic Growth Via dei Taurini, Rome, Italy

ABSTRACT

A suggestion is provided here for making the Classical Approach to the study of prices and income distribution neutral with respect to ideological choices, a move which might perhaps promote progress in Political Economics. In this respect, some flaws commonly attributed to the economic thought of Adam Smith are overcome. Solving them, it is then argued, opens up the possibility of fertile links between a Smithian approach and the John Maynard Keynes' theory of income and employment. This way, the determination of income distribution might be explained as the outcome of free choices and market mechanisms concerning the prices of commodities too, but this theoretical path could be followed without falling into the inconsistencies arising from capital measurement connected to Marginalism.

*Corresponding author

Mario de Marchi, CNR-IRCRES, National Research Council Institute for Research on Sustainable Economic Growth via dei Taurini, Rome, Italy, Tel: + 39 338 50 85 974.

Introduction

An incomplete Scientific Revolution

The theoretical reconstruction of Classical Approach to Economics, started sixty years ago by Piero Sraffa, has been presented as a premise to the critique of the dominant "Marginalism" school (the would-be "Neoclassical" perspective). Although the reasons for such a critique are well founded (in the inconsistencies of concerning capital measurement by the Marginalism), it has clashed against strong resistances by the Academic Elites, who seem to be motivated by the left-wing creed of Sraffa's followers rather than the validity of capital measurement methods used by Marginalism.

Since the publication of Production of Commodities by means of commodities (Sraffa, 1960), within the Classical theoretical approach the determination of income distribution might only have been interpreted as the result of an inverse nexus between wages and the rate of profit, described by equation:

where "r" is the rate of profit, "w" is the wage, and "R" is the maximum level (determined by technology) the rate of profit may reach in case of null wage. Sraffa's famous equation represents in a formal way the result of a clash between the classes of laborers and that of capitalists over the distribution of income, whose interpretation would inevitably have led towards the Marxian concept of "labor exploitation".

In fact, within the Classical Perspective, another approach may be explored according to which the origin of the profits is in the circumstance that prices rise above the mere level corresponding to labor value; Karl Marx discussed such thesis in the first book of his *Das Kapital*) (*Idem*, 1867) and strongly denied such possibility, by arguing it would be tantamount to suppose that capitalists gave a rip off each other. In fact, we consider just this case, in which profits arise exactly because prices go up. For this to be possible, though, the main points of the original Smithian economical analysis of prices and income distribution must be corrected by sorting out some main defects.

Solving Two Alleged Flaws in the Economic Thought of Adam Smith

Two crucial ideas put forward by Smith (Idem, 1994) are usually deemed as incorrect:

I) the proposition that a commodity price could be entirely reduced to incomes paid for its production;
II) the thesis according to which a direct causal link there would exist among an increase of the level in prices and a resulting growth in the profit rate.

The proposition I) is normally rejected by arguing that, as far as the reduction of price goes, a residual made up by means of production multiplied by their values remains and therefore the reduction will never be completed.

The thesis II) is commonly refused by stating that a relationship among prices and profit rate would be a circular one, and therefore no unidirectional, causal link might be derived from it.

Herein we are going to prove that: 1) both such seeming difficulties can be simultaneously overcome by using one analytical tool; 2) this solution opens up the possibility of an immediate integration between John Maynard Keynes' theory of income and employment and a Neo-Smithian approach.

Besides being the solution to a question originally posed by David Ricardo of finding an ideal (invariable) measure of values, the Standard Commodity, the ingenuous theoretical instrument devised by Sraffa (Ibidem) in order to solve the problem of finding an ideal measure of values put forth by Ricardo, is surprisingly also the answer for fixing the problems quoted above in I) and II). This may initially come as a surprise to many readers. The key for this unexpected result is in the nature that Sraffa attributed to his Standard Commodity: the recursive characteristic of the proportion between each layer of product and the previous layer of means of production encountered in the reduction of the Standard Commodity's final price into the prices of its layers of means of production, that Sraffa defines as the only necessary property of the Standard Commodity production ("… there is in effect only one condition, that of 'recurrence'.", Ibidem p.16). Such recursive feature appears suddenly within the rigorous reasoning of *Production of Commodities by Means of Commodities*, with a twist which should have puzzled most readers of the book and instead seem to have been noticed by very few if anyone.

This characteristic entails that the succession of incomes determined through the reduction of the price of the Standard Commodity will be a regular one, where each term is "$(1 + r)/(1 + R)$", standing as usually r for the rate of profit.

In addition, if it always must be "$r < R$", namely if R is the maximum rate of profit, the series made up by the sum of this succession is a convergent one. And, since the sum can be calculated in a straightforward way through a sequence of steps finite (in fact very short), in the Standard Commodity instance the reduction of its price can be completed.

This will solve the problem cited in I) and, as can immediately be ascertained by means of some calculations, the II) as well.

Proof of Assertions I) and II).
Let us make the hypotheses that: the wage w be paid *postfactum*; r is the rate of profit; $(1 + R)$ is the proportion between two subsequent layers of means of production.

Then, provided that r < R, the V value of the Standard Commodity can be worked out as the value of a *convergent* geometrical series of the sort:

$$V = w\,((1+r)(1+R)) + w\,((1+r)(1+R)) + \ldots + w\,((1+r)(1+R)) + \ldots$$

The result of such peculiar reduction is a new original relationship between the rate of profit and the value of Standard Commodity.

$$((1 + R)/(R - r))\,w = V$$

if, say, V increased from the minimum, viable level $((1 + R)/R)$ w (corresponding to no profits) towards the infinity, then r would grow towards a maximum R.

Some readers may be puzzled by the difference between Equation (1) and the famous Sraffa's:

$$r = R(1 - w)$$

In fact, the two are consistent and both correct. Their dissimilarities follow naturally because the second one concerns, as it is well known, the net Standard Product, whereas it is clear that the first one instead regards the gross Standard Product. Following a suggestion by Sraffa, we can give the V unit of value a more tangible content by dividing both terms of by w so that in Equation

in the second term we obtain the *work which V can pay for*, namely, in the words of Smith, the work V *commands* [1,2].

$$(1 + R)/(R - r) = V/w$$

Having reached this preliminary theoretical result, one may be tempted to compare such new Smithian perspective with the Keynesian one, provided some assumptions are made.

Merging Keynes and Smith's Approaches within a Sraffian Theoretical Environment
A straightforward path to compare the Keynesian and the Smithian approaches is to bring about a consistency between the most significant and relevant aspects of both theoretical sets. This way, one could write down a System of formulae in which one included a Keynesian contribution, another represented the new Smithian perspective and finally, a third one set up a clear relationship between the two analytical points of view [3].

Given Equation, let us suppose for the sake of simplicity, that: a homogenous commodity is only produced in the Economic System, so that the national income "Y" consists just in a quantity of Standard Product V; and define as usually the investment as "I" and the propensity to savings as "s" [1].

We can write down the System of equations "$(\sigma\rho.i)$":
$$((1 + R)(R - r)) = V/w \qquad (\sigma\rho.1)$$
$$I/s = Y \qquad (\sigma\rho.2)$$
$$Y = V \qquad (\sigma\rho.3)$$

In it:

A) $(\sigma\rho.1)$ expresses the labor commanded by the Standard Product

B) $(\sigma\rho.2)$ expresses what many scholars consider the most original and illuminating of the contributions by Keynes (Idem, 1997) to Economic Theory: the concept of multiplier and its role in the determination of national income Y

C) $(\sigma\rho.3)$ implies that

$$I^*/(w^*s) = ((1 + R)/(R - r))$$

Once determined, as in the Keynes' analysis, a given value w* of wages and a given level I* of Investments, and taken R as given along with the technology - as in Sraffa's scheme:

Equation brings about a basic, neat and empirically testable analytical consequence: such formula expresses the hypothesis that an inverse relationship there exists between the propensity to savings and the rate of profit. Indeed, in order to keep the balance between the two sides of the equation: as s fell towards zero r would tend to R, whereas, if s increased reaching its maximum value, one, r should decrease towards zero [4].

Economics as a Normal Science
So far, within Political Economics the main alternative has only been between Marginalism and the Ricardian schools of thought. Now, scholars are presented with a way out. According to Equation (B), the determination of income distribution might be explained as the outcome of free choices and market mechanisms concerning the prices of commodities too, but this theoretical path could be followed without falling into the inconsistencies arising from capital measurement connected to Marginalism. Taking the level of prices as a determinant not determined circumstance of income distribution, was this analytical path undertaken, would

put the study of competition (and its main driver, technological progress), at the center of theoretical Economists' attention even more than it already is, due to the irrefutable, growing empirical evidence. Perhaps Economics would this way gain further realism and relevance. If it were instead argued, like was once done by Sraffa, that the only reason why profits exist under capitalism is that workers cannot get the whole net product of the economic system (since they do not own the production means, Marx would have added), then one might counter that, in a capitalist economy workers, are able to get a part of surplus just because they fully possess their own labor-force, differently from what happens under the ancient, feudal and oriental modes of production. Presumably, some people may react deeming such assertion as immoral. This is just the core of the issue, and the cause for a crucial misunderstanding: in fact, Economics, as every other normal science, ought not to deal with "moral-immoral" assertions, only consistent-inconsistent ones.

In memoriam Maria Sinico, My Mother.

References

1. Keynes John Maynard (1997) The General Theory of Employment, Interest and Money. Buffalo, NY: Prometheus Books.
2. Marx Karl (2011) Capital. Volume I: A Critique of Political Economy: The process of Production of Capital. Mineola, N Y: Dover Publications.
3. Smith Adam (1994) An Inquiry into the Nature and Causes of the wealth of Nations, New York, NY: The Modern Library.
4. Sraffa Piero (1960) Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory. Cambridge: Cambridge University Press.