Maurice Dobb Papers Trinity College, Cambridge DOBB DD210 (48)
Lectures DD210

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Comments on: M.H. Dobb, "Some reflections on the Sraffa system and the critique of the so-called neo-classical theory of value and distribution".

The inadequacy of the so-called "neoclassical" [1] theory as a macroeconomic theory of production and distribution should be clear from the lucid and learned paper by Maurice Dobb (and by the less explicit, but no less provocative survey of capital theory by Geoff Harcourt). I can only offer a few comments and expand on some of the points already made.

Maurice Dobb rightly disputes the connection of this theory - as represented for instance by the writings of Samuelson and Solow and their British epigones - with the "classical" economic thought. Joan Robinson calls it "neo-neoclassical" to stress the remoteness of the connection with both the classical thought of Ricardo and Marx and the "neoclassic" - mainly micro economic - tradition of Marshall and Wicksell [2]. Following Marx, we could label the "so-called neoclassical theory" as a species of "Vulgar Economics". By "classical Political Economy" Marx meant the investigation of

> "... the relations of production in bourgeois society, in contradistinction to vulgar economy, which deals with appearances only, ruminates without ceasing on the materials long since provided by scientific economy, and there seeks plausible explanations of the most obtrusive phenomena, for bourgeois daily use, but for the rest, confines itself to systematizing in a pedantic way, and proclaiming for everlasting truths, the trite ideas held by the self-complacent bourgeoisie with regard to their own world, to them the best of all possible worlds" [3].

This is a definition that fits well a theory which gives an impersonal and politically neutral solution to what was for Ricardo

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1. By "neoclassical" theory I mean a macroeconomic theory of production and distribution stating that in the economy (i) there is a relation between output per man and the relative quantities of production factors (capital, labour, land, technical knowledge mostly represented by time) and in particular the value of capital per man; and (ii) this relation is such that the higher the value of capital per man, the higher is output per man and the lower the marginal product of labour. In these conditions, perfect competition and profit maximisation ensure that profit rates are inversely related to the value of capital per man and the capital output ratio.

2. See J. Robinson, "Let the hundred schools contend, but let them state their assumptions", a mimeographed sheet, 1966.

3. See K. Marx, Capital, I, Part I, Ch.1, footnote at p. 81 of the English edition, Moscow 1961.

"the principal problem in Political Economy". The state of technology and relative factor supplies determine relative income shares. There are classes but there is no room for, nor point in class struggle in a world where everybody, by implication, is getting his "fair" share according to his individual contribution to the production process. For the sake of simplicity we shall go on calling it neoclassical theory.

What makes the neoclassical theory vulnerable is the extension of microeconomic concepts to the field of macroeconomics. From the viewpoint of the investing firm operating in competitive markets, at a given set of actual and expected prices of commodities (including capital goods) and labour, capital as finance can take any physical form; the conditions necessary for the validity of neoclassical theory could hold (although difficulties arise in the case of increasing returns to scale). But from the viewpoint of the economy as a whole, an additional condition is required; the profit rate postulated in the pricing of commodities and capital goods should be equal to that prevailing in the economy as the outcome of the choice of individual economic agents. The fulfilment of this condition requires either perfect foresight, which simply rules out all problems of macroeconomic equilibrium, or the malleability of capital, i.e. the reversibility of choices by their nature irreversible. This is true also of the Walrasian approach to capital and distribution. The equilibrium position of a Walrasian system with net capital formation requires the equality of the net rates of return on all kinds of capital goods, with the price of capital goods equal to their cost of production. As Piero Garegnani has shown, a Walrasian system cannot obtain simultaneously the equalisation of net rates of return under these conditions and the quantities of new capital goods currently produced [1]. The simultaneous determination of these unknowns depends on the possibility of treating "capital" as a single object which can indifferently take the form of any particular type of capital good "as if it were a fluid which can be freely transferred from one container to another" [2].

Failing these conditions, neoclassical theory runs against the critique raised in the debate summarized by Dobb and Harcourt. It is true that the first severe blow was given by Sraffa, Robinson and others who have shown the possibility of reswitching of techniques [3]; when this occurs it becomes impossible to order production techniques according to the

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1. See P. Garegnani, Il capitale nelle teorie della distribuzione, (Capital in distribution theories), Milan 1960, Ch. 2 and 3 of Part II.

2. Ibid., p. 115.

3. This is the eligibility of a production technique at more than one level or range of the profit rate, with other techniques being eligible at intermediate levels or ranges.

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profit or wage rate associated with them; even the approach based on index numbers - ingenious but operationally meaningless - ceases to hold. It seems to me, however, that the coup de grâce has been given not so much by the reswitching phenomenon, as Maurice Dobb puts it, but by the more recent work of Pasinetti, Garegnani and Spaventa. Pasinetti has shown that another pillar of neoclassical theory, the notion of "rate of return" cannot be defined independently of the rate of profit and "is devoid of any autonomous theoretical content".[1] Garegnani and Spaventa have shown that even in the absence of reswitching, the same value of capital per man can occur at more than a single level or range of the interest rate; furthermore, that both the value of output per man and capital per man are affected by the growth rate of the economy, so that even for a given interest rate the same value of capital per man can occur at more than a single level or range of the growth rate[2].

The acceptance of the neoclassical theory of production and distribution therefore requires faith that neither reswitching of techniques nor any of the other awkward cases pointed out in recent literature occur in reality. This is openly admitted in the latest neoclassical literature. C.E. Ferguson, the author of a book entitled "The neoclassical theory of production and distribution" writes in the introduction:

> "My point of view is uncompromisingly neoclassical".
> ...
> The validity of the Cambridge Criticism of neoclassical theory "is unquestionable, but its importance is an empirical or an econometric matter that depends upon the amount of substitutability there is in the system. Until the econometricians have the answer for us, placing reliance upon neoclassical economic theory is a matter of faith. I personally have faith; but at present the best I can do to convince others is to invoke the weight of Samuelson's authority ..."[3].

The validity of any kind of econometric work based on the notion of an aggregate production function is undermined by the critique mentioned above, so that econometricians have no way of settling the dispute. The answer might perhaps come from engineers, i.e.

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1. See L.L. Pasinetti, Switches of technique and the "rate of return" in capital theory, Economic Journal, September 1969, p.529.

2. This proposition has been stated by Spaventa for a two-sector model, by Garegnani for a multisector model, and by myself for a model of production of the Austrian type. See L. Spaventa, Realism without parables in capital theory, in CERUNA, Recherches récentes sur la fonction de production, Namur 1968; Rate of growth, rate of profit, value of capital per man, Oxford Economic Papers (forthcoming); P. Garegnani, Heterogeneous capital, the production function and the theory of distribution, Review of Economic Studies (forthcoming); D.M. Nuti, Capitalism, socialism and steady growth, Economic Journal, March 1970.

3. C.E. Ferguson, The neoclassical theory of production and distribution, Cambridge (U.K.) 1969.

from a detailed analysis of the specific aspects of the state of technology, but this is not yet in sight. Until then, reliance upon the neoclassical theory of macroeconomic production and distribution will remain a matter of faith.

Although the notion of "value of capital" is neither useful nor necessary to determine technical choice, in a capitalist (nor, for that matter, in a socialist) economy, the concept of "value of capital" - as I have said elsewhere - is indespensable to the Political Economy of capitalism because it performs two fundamental rôles, one practical and one ideological:

> "At a practical level the evaluation of machines of different kinds and ages in terms of output is needed to settle transactions among capitalist firms, to determine the value of the legal exclusive right to use machinery, and the value of the pieces of paper embodying such rights. It is necessary to determine distribution of income not between the haves and the have-nots but among the haves.
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> The ideological role of "the value of capital" is that of breaking the direct actual link between the _time pattern_ of labour inputs and the _time pattern_ of output in which any technology can be resolved, and establishing instead a relation between _current_ output and _current_ labour. To this purpose the _current_ "value of the capital stock" is needed; a mythical conceptual construction in which the past and the future of the economy are telescoped into the present. Attention is focused not on past labour but on the present value of the embodiment of past labour, and its current productiveness can be taken to provide a justification for the attribution of the surplus of current output over the wage bill to those who have appropriated the embodiment of past labour, thereby providing the current basis of future appropriation"[1].

A political element in the theory of distribution was introduced by Kalecki in his theory based on the "degree of monopoly"[2]. Kalecki assumed a reverse L-shaped cost curve, prime costs being constant up to full capacity output and marginal costs equal to average prime costs. The degree of monopoly defined as the excess of price over marginal cost, divided by price, was hence equal to the share of profits in the output of each firm, and the share of profits in the national income was a weighted average of the degree of monopoly in all the firms of the economy. Unfortunately this way of introducing monopolistic production relations in the theory of distribution is not satisfactory because, as Kaldor

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1. D.M. Nuti, _cit._

2. M. Kalecki, The determinants of distribution of national income, _Econometrica_ 1938, n.2; _Essays in the theory of economic fluctuations_, London 1939; _Theory of economic dynamics_, London 1964.

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wrote [1], either the degree of monopoly is simply defined as the excess of actual price over actual marginal cost, and in the circumstances considered (i.e. marginal equal average cost) the statement is tautological, or the degree of monopoly is obtained from the demand curve of each firm and found equal to the inverse of the demand elasticity given the hypothesis of profit maximisation; the theory runs against the same problems as neoclassical theory, namely the reliance upon microeconomic concepts (here, the elasticity of demand) to explain a macroeconomic problem.

The relation between the real wage rate and the profit rate uncovered by Sraffa, and before him by the Russian economist Dmitriev [2], restates the conflict between capitalists and workers in the problem of income distribution, and provides scope for the concept of class struggle in the determination of relative shares. Unfortunately, however, there is no simple way of closing his system, i.e. of determining which point of the wage-profit relation is actually reached and how in any economy.

The real wagerate cannot be taken as exogenously determined as in the classical thought, fixed at a subsistence level in conditions of elastic labour supply. Nor can it be determined <u>directly</u> by the class struggle, as it is postulated in French literature by Marchal and others[3], because after Keynes we have to recognize that wage bargaining determines <u>money</u> wages, whilst the real wage rate is determined by the behaviour of the price level. Sraffa provides a suggestion that the profit ratio "is susceptible of being determined from outside the system of production, in particular by the level of the money rates of interest" [4]. It seems to me, however, that this is a false lead, because - apart from the imperfections of the financial market - the level of the money rates of interest can determine technical choice only in a world of constant price level. If prices are expected to rise or fall in future, the real wage rate that firms can afford to pay will depend not on the money rates of interest, but on the <u>real</u> cost of borrowing, i.e. the interest rate <u>minus</u> the expected rate of price change. An alternative way of closing

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1. See N. Kaldor, Alternative theories of distribution, <u>The Review of Economic Studies</u>, n.2, 1955.

2. See V.K. Dmitriev, <u>Ekonomicheskie Ocherki</u> (Economic Essays), Moscow 1898, p. 47 of the French translation of the 1904 edition, Paris 1968.

3. J. Marchal, Contribution à une étude réaliste de la répartition, <u>Revue Economique</u>, March and May, 1952; The construction of a new theory of profit, <u>American Economic Review</u>, September 1951; J. Marchal and J. Lecaillon, <u>La répartition du revenue national</u>, 1958.

4. See P. Sraffa, <u>Production of commodities by means of commodities</u>, Cambridge 1960, Ch. V, p. 33.

the system has been suggested by the post-Keynesian Cambridge theory of distribution, stating the dependence of the profit rate and relative shares upon the growth rate of the economy and the saving propensities of capitalists.[1] This, however, is a necessary relation that must always hold for macroeconomic equilibrium among ex-post magnitudes. As such it cannot be disproved, and therefore it does not provide a theory of the determination of the profit rate and income shares, especially in the short run. There is no reason to assume that at full employment the ex-ante propensity to save of capitalists should be equal to the ex-ante ratio of investment to profits. If there is ex-ante macroeconomic disequilibrium between saving and investment decisions, the economy in the real world will somehow accomodate the disequilibrium through changes in inventories and waiting lists, price changes, and revisions of expenditure plans; this has a feed-back on prices and the whole process will continue until supply equates with demand. Ex post, we observe a level of investment but this need not be the same, as a share of profits, as the proportion which capitalists would have wished to save at the level of profits actually obtained. It may behigher, or lower, depending on the effects of price changes on the different categories of expenditure plans in real terms, the relative speed of response of different categories of income to price increases and their relative propensities to spend, the relative liquidity strength of different categories of spenders, and the state and change of their expectations.

I should like to suggest for discussion, therefore, that a promising way of approaching the theory of distribution could be that of combining the Dmitriev-Sraffa relation between wage and profit rates, with the little we know - not least from Marx - about the interaction of real and monetary phenomena.

London, 10 January 1970.

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1. See N. Kaldor, cit.; J. Robinson, The accumulation of capital, London 1956; L.L. Pasinetti, Rate of profit and income distribution in relation to the rate of economic growth, Review of Economic Studies, 1962.