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RECONSTRUCTION OF THE THEORY OF DISTRIBUTION IN THE LABOUR-MANAGED ECONOMY FOLLOWING THE EXAMPLE OF POST-KEYNESIAN ECONOMIC THEORY

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One is sure to find more on labour-management or self-management in books and articles written by numerous authors all over the world than there is real self-management in existing social systems. Many economists have been inspired to study the labour-managed economy. On the one hand they have been encouraged by the theoretic chalenge to construct a new social system, and on the other hand by the recognition that the contradictions in capitalist as well as state socialist societies have created various forms and elements of self-management in those societies. In part, they have been attracted to it by the results of the experiment to build up a complex labour-management organization of society in Yugoslavia. Their judgments of the economic system in question have ranged from totally negative ones to rather euphoric eulogies. But regardless of their assesment of self-management, the theoretic analysis of the labour-managed economy has often been based either on the most orthodox Neo-Classical theory or on Marx's Capital.[1]

The appearance and development of the Neo-Ricardian and the Post-Keynesian theory of economics have, by criticizing the Neo-Classical and Marxian theory of economics, which both are the theoretic basis of a great part of the theory of the labour-managed economy, begun breaking up this theory. Economists who analyse the functioning of the labour-managed economy, cannot avoid the question of to what extent changes in the pure theory of economics can influence the comprehension of the labour-managed economy. For this reason, the purpose of my paper is to reconstruct, on the basis of the Post-Keynesian theory, the central part of the model of a labour-managed

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[1] Among those who merit special thanks for the Neo-Classical interpretation of the labour-managed economy are Ward (1958), Domar (1966), Vanek (1969), Furubotn (1976), and Mead (1972). Most of the literature on labour-managed socialism has been written by Yugoslav authors. These authors have, with few exceptions, at least tried to pursue Marx's economic ideas (e. g.: M. Korać, 1961; M. Todorović, 1962; I. Lavrač, 1968; Z. Pjanić, 1974). However, tendencies of eclectic unification of different economic schools are often present in these authors' theories.

economy, i. e. the theory of distribution in the economy in question.[2] I will not attempt to prove certain theoretically and practically well-etasblished forms of distribution in the labour-managed economy in any new way, but I will above all try to reconstruct such a system of distribution, based on the Post-Keynesian theory from the patterns of distribution already established that ensure an efficient functioning of the labour-managed economy.[3]

WHAT IS A LABOUR-MANAGED ECONOMY?

There are two significant characteristics that determine a labour-managed economy, and they are applied to the model analysed in this paper:

First characteristic: A labour-managed economy is in the first place determined by worker self-management. It is supposed to be an historic form of human societal organization which breaks the existing monopoly of capitalist or state management. This is carried out primarily through the decentralization of management to the majority in the society — the working class — and then to all members of that society, in which case the right to manage becomes an individual right. In order to break completely the capitalist or state monopoly this individual right should be treated as an equal right, which could replace the monopoly rights of capitalist production as well as those of centrally-planned state socialism. Self-management, being management by each individual member of society, can achieve decentralization of management and affirmation of the individual right, yet is in itself unable to ensure absolute equality of management. For that reason it is to be considered as a necessary condition for the realization of social-ownership relations.

Since self-management is found to exist in industrial societies, it must be adapted to the laws of the industrial social division of labour, and workers as self-managers have to be linked with other workers at the level of an individual unit of the social division of labour, since they themselves as individuals are unable to produce or manage production. Such a unit — a factory — is the lowest possible level of management and production, within which the basic problems of what, how, how much and for whom to produce can be solved. Within its framework, the functions and results of management under the conditions of industrial technology become most evident. That is why self-management has been defined as the management of workers in a factory, where workers become the main (in our analysis, due to simplification, the sole) subject of management.

Second characteristic: Commodity production is a specific feature of a labour-managed economy. Two reasons justify commodity produc-

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[2] In this article only that part of the reconstruction of the theory of labour-managed economy which concerns distribution is being dealt with.

[3] The model being presented in this article doesnot indicate distribution in the Yugoslav economic system. This does not of course mean that it cannot be instructive for Yugoslavia.

tion in a labour-managed economy. The first lies in the development of productive forces in existing societies (socialist ones included). The labour force continues to be an important factor of production. Abolition of objective constraints in the development of productive forces, which are, in the production of economic goods, exercised through competition, would thus submit social reproduction to the laws of subjective conciousness. Hence, competition has to remain the main motive force of the labour-managed economy. The second reason justifyng commodity production is self-management itself. If workers' management of factories (which has been already defined as self-management) is to be secured then the functions of management have to be decentralized at factory level, which is ensured by commodity production.[4] In this way the work collectives in factories become independent managers-entrepreneurs, the results of whose work are objectively measured through competition. The production of commodities is considered to be the necessary condition for self-management. Since self-management is a unique form of workers' management as commodity producers, and since commodity production is the effective type of production at the actual level of development of productive forces, self-management has today become the only historically logical form of the power of workers in the production process.

In order to obtain a model of distribution in the labour-managed economy, it is necessary to determine, other characteristics of the economy in question in addition to the two general characteristics above. These characteristics which are not considered by a number of analysts of the labour-managed economy, are, as will be proved further on, essential for the effectiveness of the labour-managed economy. These are the characteristics that are going to determine the particularities of our model.

Third characteristic: By selling their goods on the market, the workers in factories — work collectives — generate their income, which is divided into personal incomes (salaries) and interests. Interests represent a cost which is computed by the work collectives according to the interest rate uniform to all work collectives as well as housholds. Interests must be saved by work collectives and their propensity to saving is therefore represented by the following

$$s_f = 1 \tag{1}$$

Personal incomes are individually appropriated by workers as members of work collectives. Households use personal incomes for the reproduction of their labour force and partially for savings. Their propensity to save is thus

$$0 < s_h < 1 \tag{2}$$

[4] Central planning makes this impossible. Thus in centrally-planned, state-controlled systems self-management is not possible. Less commodity production means more of a state and less of self-management (as is being proved by Yugoslav experiences).

Households' savings can be lent to work collectives. Hence, households have two sources of income: personal incomes and interest returns on savings given on loan to work collectives.

A POST-KEYNESIAN GUIDELINE: THE DISTRIBUTION OF INCOME AND SAVING RATIOS IN A LABOUR-MANAGED ECONOMY[5]

The following equation representing national income (Y) in a labour-managed economy can be formulated on the basis of the third characteristic above as a sum of personal incomes (PI), interest returns of households calculated according to the uniform interest rate (i) on the savings loaned — capital of households (K_h), and interest earned by work collectives on capital with which they manage in the factories (K_f)

$$Y = PI + iK_h + iK_f \tag{3}$$

The equation representing the savings of the economy (S) consists of the savings of households from personal incomes and from interests and savings — interest returns of work collectives:

$$S = s_h (PI + iK_h) + iK_f \tag{4}$$

If equation (4) is divided by national income (Y) we get the following formula:

$$s = S/Y = s_h \frac{PI + iK_h}{Y} + \frac{iK_f}{Y} \tag{5}$$

According to the Post-Keynesian example, equation (5) might help us to explain the average propensity to saving (saving ratio). As the propensity to saving in enterprises exceeds the propensity to saving in households, a greater saving ratio requires a greater share of income of work collectives and vice versa.

As it is actually well-established, this initial finding in the theory of distribution in the labour-managed economy (which is formally the same as in the theory of distribution in a capitalist economy) might become effective under the following condition:

$$0 \leqslant s_h < g_n k < s_f \qquad \begin{array}{l} g_n \text{ — natural growth rate} \\ k \text{ — capital-production ratio} \end{array} \tag{6}$$

In such a case, the fluctuations in the average propensity to saving in the labour-managed economy could be explained by equation (5). Due to equations (1) and (2), which express the essence of the labour-managed economy here analysed, condition (6) is being fulfilled.

[5] The reader will notice that this chapter refers to Pasinetti (1974).

In the case that the propensities to saving of households and enterprises were identical, the distribution of income could no longer be connected with the saving ratio (s).

THE LABOUR-MANAGED ECONOMY AND EFFECTIVE DEMAND

The Post-Keynesian theory of distribution is substantiated by the theory of effective demand, in the terms of which Post-Keynesian economists explain what is determined by what in an economic world.

The essence of the theory of effective demand in the model of the labour-managed economy analysed above is formulated by the two equations derived from the already established third characteristic of the economy analysed, plus two new ones derived from the first three characteristics, and pertaining to the labour-managed economy.

The following two equations must be realized in a labour-managed economy according to the theory of effective demand:

$$\textit{interests} \left\{ \begin{matrix} \textit{households} \\ \textit{work collectives} \end{matrix} \right\} = \textit{investments} \tag{7}$$

$$\textit{personal incomes} - \begin{matrix} \textit{household} \\ \textit{savings} \end{matrix} = \textit{household expenditures}$$

The left-hand side of the equation (7) is determined by the third characteristic of the analysed economy. The question of crucial importance to the interpretation of distribution is above all which category in the equation is to be adjusted to the other, or rather which category determines the size of the other. In order to answer this question, we must find in the first place an answer to two other questions: a) Is any one of the elements from the left-hand side of equation (7) a cost? b) Can the two right-hand side elements of the equations be formed independently from the corresponding two left — hand side incomes?

If these two well-known questions in the theory of effective demand are to be answered, two other characteristics of the labour-managed economy must be determined first.

Fourth characteristic: The labour force in the labour-managed economy is no longer a commodity; there is no market for it, and personal incomes are not the price (the labour force is still allocated by the market, for the personal incomes are determined by forces on the markets of other commodities). As has already been determined by our first characteristic, the realization of the right to social ownership means the realization of equal rights of all workers, which means the realization of workers' equal rights to means of production. Only under such conditions can workers themselves become organizers of production and their personal income be no longer earned by the sale of their labour forces, as there are actually no buyers for it, but through the sale of the results of their labour. A worker's legal emancipation ceases to be a precondition for the commodity value of his labour; rather it turns into a condition of the worker's assertion as a self-manager.

Fifth characteristic: The main motive of workers' management is their personal income. In the labour-managed economy where the worker is the main subject of management and his labour force loses its commodity value, the worker's participation motive in the labour process becomes the main motive of management in an economy as such. That is his personal income. As long as there exists private ownership of labour forces, personal income is the worker's main motive, since it is closely related to the reproduction of labour force. In the labour-managed economy one can find no other subject of management than the workers, and so there is in the economy no other motive than the worker's motive — personal income.

The worker enters the production process with his labour force so that it can be reproduced. He stops to measure the fulfilment of his work motive in terms of capital, but manages his labour force and capital in such a way which ensures him maximum personal income per one unit of labour force (which is reproduced through personal incomes). The criterion of management is thus personal income per unit of labour force.

Accumulation would in addition to the personal income motive be the only sensible motive if it helps increase personal income per unit of labour force. From this point of view, one may consider the finding derived from the critique of the Neo-Classical theory of capital through the theorem of reswitching of technique in which the work collective does not reach a higher level of income and personal income through accumulation, and that accumulation does not necessarily mean a higher income tomorrow a very important point. The worker cannot be indifferent either to accumulation or to personal incomes even if his entrepreneurial function should be related to a certain work collective. Since the direct link between accumulation and personal income is not theoretically established (pay attention to the discusion of a capital reversal and a switch in methods of production), the realization of the personal income motive means that the worker as a member of a work collective has a tendency to usurp all income in the form of personal income.[6] He will not accumulate unless he is forced to. And he would be obliged to should he be co-owner of capital in his work collective (which cannot be realized if we recall the first characteristic of the labour-managed economy), if his labour force were not mobile among work collectives (which becomes impossible considering the private property of labour force), and if he were forced to do it by a social norm (such as is the interest rate in our model). It should be made to function in such a way that, if not met by the worker, his personal income should suffer (an interest rate is to function in such a way too). Only thus could accumulation become a direct condition for the realization of higher personal incomes per unit of labour force.

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[6] Arguments for this assertion are explained at length by the author elsewhere (Tajnikar, 1983, p. 98).

DISTRIBUTION IN THE LABOUR-MANAGED ECONOMY IN THE SHORT TERM

For the Post-Keynesians, a short term in an economy is determined as one in which production capacities do not alter, (technological progress cannot take place) and the problem of employment of production capacities is a focal one. Since investments in the short term are not of importance, we are principally interested in the second of our equations (7). Following the example of the Post-Keynesians, we can explain that in the labour-managed economy personal incomes are determined by household expenditures, which is the principal finding of our short-term theory of distribution in the analysed economy.

Due to the non-commodity character of labour force, which has been proved under the fourth characteristic, personal incomes cease to be a price for labour force. Personal incomes do not appear at the beginning of the production process, since they are no longer formed through the buying and selling of labour force at the outset of production. They make up a part of income which is determined at the end of production by selling the goods on the market, and is not influenced by the condition of the labour force market, but by the market of sellers, i. e. in accordance with the size of production (output) and its price on the market, which are dependent upon effective demand. It is very important that the modern credit system has loosened the relationship between personal incomes and household expenditures, whic has caused those expenditures to be formed without regard to their personal incomes. Any autonomous expenditure by households results in higher incomes either by way of higher production or higher prices. According to Kalecki, we can claim that in the labour-managed economy workers earn as much as households spend.

Any fluctuation in personal incomes due to a shift in household expenditures may arise out of a change in the size of production, or following a shift in commodity prices on the market. The fact whether any change in personal income is to be real or just nominal depends mainly on the motive of management, which has already been determined by our fifth characteristic.

To analyse the short term relationship between effective demand and personal incomes, we shall take into consideration a typical supplier — work collective and its behaviour in following the changes in effective demand. The following assumptions will be made:

a) the work collective attempts to adjust to fluctuations in effective demand by maximizing personal incomes per unit of labour force (characteristic no. 5)

b) all producers act simultaneously and homogeneously (which shall be determined by studying a typical supplier). The competition is therefore oligopolistic. A typical supplier's average cost curve (AC) should be falling until full employment of all productive capacities is reached, as average fixed costs decrease following an increase in employment of production capacities. The higher the rate the deeper the fall of the curve, since the interest rate is characteristically a short-term fixed cost of given production capacities. Vertical diver-

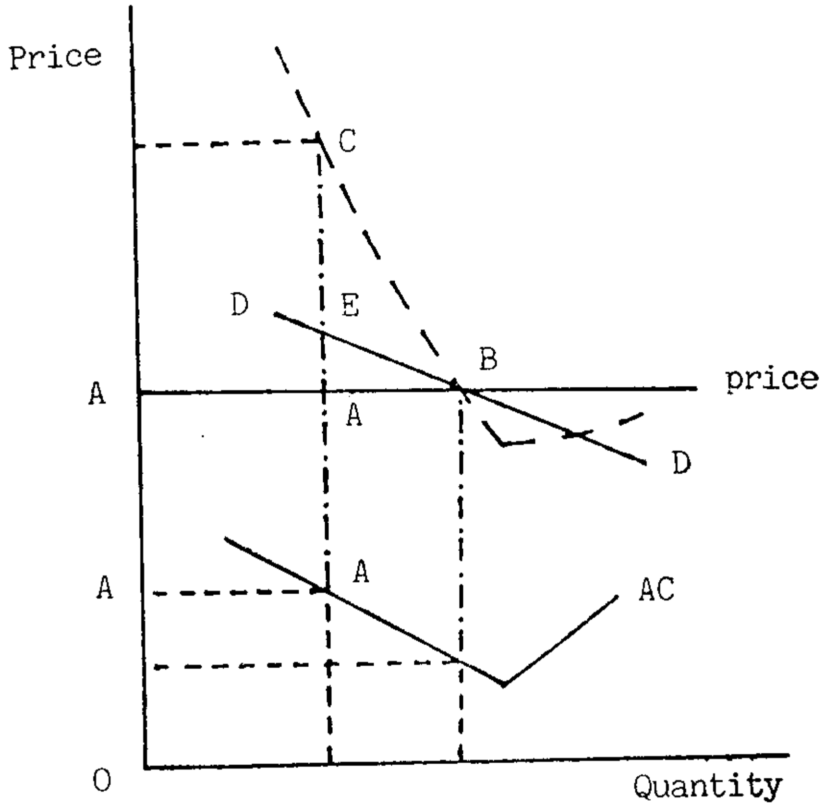

Figure 1

gence in price and average costs in Figure 1 is personal income per labour force unit because, as has been mentioned above, interests are included in costs, and employment of productive capacities follows fluctuations in the employed labour (labour force is the main variable input in the short run). The size of output follows fluctuations in the labour force employed. In our analysis the original effective demand is determined by a rectangular AAAA in Figure 1, which is defined as the product of an average personal income and the size of production.

Let the effective demand be altered so that it allows work collectives to earn income from the curve through points B and C, which determine different combinations in the average personal incomes and the size of production whose product equals the newly reached effective demand. The question remains what the supplier who maximize their personal incomes per labour force unit should do in case of this new effective demand: Whether to raise the price or to increase the size of production by employing all the production capacities better? From Figure 1 it is evident that their personal incomes per labour force unit would increase much more if they had raised the price at the original level of production (they would then be determined by the distance AC—C), than could be reached by maintaining the original price level and increasing employment of production capacities (their personal income per labour force unit would be equal to the distance AC—B).

The personal income motive in oligopolistic competition tend to raise prices following an increase in the effective demand but does not lead to a better employment of production capacities, a higher level of labour employment or greater autput.[7] Since the presumption that a worker should not fire his own labour force is surely a sensible one, from the point of view of maximization of personal income per labour force unit following a decrease in effective demand, the worker remains impartial to a decrease in the size of production (he does not decrease the quantity of employed labour force) as well as to a fall in the price of commodities, which can easily be proved.

The above analysis can be considered valid only under the assumption that all suppliers act as one, and that there is no danger of entering an industry. When all these suppositions, which are restrictive for competition, are removed, then the motive for maximal personal incomes would lead to an increase in the production. As can be seen from the demand curve DD, Figure 1, higher prices would, in a more competitive situation and in case of greater demand, decrease a supplier's share of the market to such an extent that it would lead to personal income per labour force unit being lower than if it was, reached by an increase in the amount of production and by keeping the previous price (AC—B instead AC—E). To this extent a truly competitive market is considered to be more important for the labour-managed economy that it is for the capitalist one.[8]

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[7] In fact the problem does not originate from personal incomes as motives. Even if the criterion of economy were the income per employed worker or per labour force unit, respectively, the economy would behave in the same way. The reason for effects described must obviously be hidden in the criterion used for measuring personal incomes, i.e. »per labour force unit«.

[8] In the capitalist economy where a profit role is maximized, the profit rate numerator is determined by the size of effective demand (profit = investment + consumption of the capitalists), while the denominator is the capital. Since, from the profit rate point of view, different utilization of productive capacities and price changes do not affect the size of the capital (in the labour-managed economy the amount of labour force employed is increased), the capitalist remains indifferent to the price increase and to the increase of the utilization of productive capacity due to greater effective demand. Yet, if the utilization of productive capacities is increased, the effective demand being given, the capitalist's profit rate does not change, but he can, due to falling costs, reduce the price and increase his competitiveness. In the labour-managed economy, personal income is determined by the size of effective demand. As we explained, personal incomes are maximized in this economy per unit of labour force, and number of the labour lorce follows fluctuations in the utilization of productive capacities. Price changes therefore effect personal income and do not affect the size of the employed labour force. But, changes in the utilization of productive capacities affect personal incomes in the same direction as they affect the size of the employed labour force. Thus, personal incomes per labour force unit may slightly increase, fall, or remain unchanged due to greater efective demand. Workers thus prefer prices to increase. If in the labour-managed economy the productive capacities of some supplier is increased, effective market demand being given, the first consequence of his action is the fall in his personal incomes per unit of labour force. This lower personal income would be reinstated only if his reduced price due to falling cost reallocates effective market demand to his product. Thus, unlike the capitalist, workers are less interested in increasing the utilization of productive capacities and labour force employment and in strengthening the supplier's competitiveness.

DISTRIBUTION IN THE LABOUR-MANAGED ECONOMY — IN THE LONG RUN

In the labour-managed economy (as explained in the five characteristics), personal incomes are determined by the consumption of households (short-term distribution theory). Yet, in long-term distribution theory, attention is focused on investment, since, for Post-Keynesian economists, a long run is considered to be a state in which production capacities also change. In a similar way as the second equation of the system (7) has been explained in the short-term analysis, in the long-term distribution analysis the first equation, which determines the equilibrium between interests and investments, will be interpreted.

The relation between interests and investments will be analysed as a relation between the interest rate and investment rate. According to the third characteristic, work collectives are to divide income into two parts, of which interests are determined as costs at a uniform interest rate (i). Interests are also supposed to be the savings source of the work collectives. The interest rate (i) should also exist for households, so that they would also earn interest returns on savings lent to work collectives at interest rate (i). Every dinar of the capital being used in the economy thus earns interest returns at the level which is forced on by the interest rate (i). The following equation therefore exists in the economy:

$$i = \frac{A}{K} = \frac{A_h}{K_h} = \frac{A_f}{K_f} \tag{8}$$

A — accumulation in the economy ($= A_n + A_f$)

A_h — part of accumulation being obtained by households in the form of interest (iK_h)

A_f — part of accumulation being obtained by work collectives (iK_f)

K — capital (savings) in the economy ($= K_h + K_f$).

The equation below also exists:

$$\frac{S}{K} = \frac{S_h}{K_h} = \frac{S_f}{K_f} \tag{9}$$

S_h — household savings

S_f — savings of work collectives.

It has been assumed that the capital of households and that of work collectives are of a long run nature and do not supersede each other, which of course means that in the long run they increase proportionally. If it is assumed that both capitals occur through savings, their increase is proportionally indicated in equation (9).

With the help of equations (8) and (9) the following equation can be derived:

$$\frac{A}{S} = \frac{iK_h}{s_h\,(PI + iK_h)} = \frac{iK_f}{iK_f} \tag{10}$$

showing that

$$s_h\,(PI + iK_h) = iK_h \tag{11}$$

With the help of equations (10) and (11) and of equilibrium relation I = S the next equation can be derived, which determines the relation between interest rate and investment rate:

$$i\left(=\frac{A}{K}\right)=\frac{I}{K} \tag{12}$$

Equation (12) is the well-known Cambridge equation: it also exists in the labour-managed economy. Irrespective of the fact that in this economy households decide freely on how much of their earnings is to be spent or saved, they affect neither the relation between the interest rate and the investment rate nor the two rates themselves. In the labour-managed economy, the savings behaviour of households is of no importance for the relation between the interest rate and investment rate.[9]

With the help of equation (12), a long-term distribution theory in the labour-managed economy can be developed if two questions are answered. First, in equation (12) causality should be established: Is the interest rate able to direct investment decisions to an investment rate? Or does the investment rate determine the accumulation rate which can then differ from the interest rate? And, if it were discovered that the investment rate could be determined with the interest rate, another important question would arise, i.e. what determines the interest rate?

1. First, we will try to answer the question of whether the interest rate is able to direct the investment rate. To answer this question, the following must be considered: a) who is the main subject in the economy and what is his motive and b) how is investment activity financed in the labour-managed economy? The first question has already been answered by the fifth characteristic, so the two possible systems of financing investment activity in the labour-managed economy will be studied in detail.

a) Let it be assumed that only external financing of investment activity exists. Work colectives would raise investment loans in ot-

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[9] The relation between the interest rate and investment rate is derived with the help of Pasinetti's example (1974).

her work collectives and in households, paying interest at the interest rate (i). This assumption we will call characteristic 6a.

In this case, the influence of the interest rate on the investment rate would be weak. It is doubtful if work collectives would in any way raise loans at an interest rate higher than the productivity growth of their labour already employed. Quite positively, they would not invest at a rate lower than the productivity growth rate of their labour, as in this case their own labour force would have to be dismissed or they would have to accept a lower personal income per labour force unit. Any investment rate higher than labour productivity growth would be senseless, since, for employed workers, a higher investment rate means lower personal income. Even in this case, work collectives can avoid a too strong interest rate constraint, namely, by not taking external investment sources but by financing (lower) investments using their own sources — savings. Such a financing system of investment activity thus makes interest rate influence on the investment rate quite impossible. In a case of a more developed financing sysem of investment activity, when investment should be financed mainly externally and when personal incomes rule as a motive for economizing, a more sensible prediction would be to the point, i. e. that in a case of characteristic 6a the investment rate in equation (12) would determine the accumulation rate, wheres the interest rate would not have an essential role.

b) Now we will change the financing system of investment activity. Work collectives shall be forced to calculate the interests on total capital (generated from their own and foreign savings) being used, at interest rate (i). These interests should then as accumulation increase capital (interests on the capital of some work collective would increase their capital — the base for the interest calculation). This should be termed characteristic 6b.

Such an obligatory self-financing system would not allow work collectives to invest at an investment rate lower than the interest rate. Due to equation (12), a lower investment rate would lead to an accumulation rate lower than the interest rate, which means that work collectives would have to create accumulation to the detriment of their personal income. Work collectives would also not be motivated (from their viewpoint of the motive of economizing — characteristic 5) to invest at a rate higher than the interest rate, as such an investment rate would decrease their personal income needlessly (exeptionally they would invest, even if the investment rate fell below the growth rate of labour productivity and they would thus have to dismiss their own labour force). It can therefore be concluded that, in a system of obligatory self-financing of investment activity, the interest rate would determine both the accumulation rate and the investment rate.

In an investment system of this kind, three characteristics should be pointed out.

a) It is of course senseless to expect workers always to find an appropriate investment project inside »their factory«. The investment system should thus give them the possibility to leave their savings freely to other work collectives and also to unemployed workers (their own investment being inefficient, the workers could create the interests at the interest rate only to the detriment of their personal income, so it would be wiser for them to leave their savings to other work collectives or to unemployed workers). But anyone using the capital should earn at least the amount needed for accumulation at the interest rate.

b) In this case, it would not matter any more that the worker's personal income motive is short-term and that his labour force is mobile, as the interest rate should be taken into account anywhere he worked. Mobility of his labour force would no longer be related to the reproduction of production means (through the size of accumulation and the income per employed worker, respectively) but would only depend on the reproduction level of his labour force (personal income per labour force unit).

c) This kind of investment system would make the dreams of many economists a reality:[10] to maintain enterpreneurial independence when investing but to make the investment subject to the global aims of society. The interest rate would demand the economy's subjects to save the amount needed to meet development aims, and to invest at a rate that would enable realization of these savings. At the same time, the independence of work collectives, when making decisions on investment, would be maintained inside the global investment. Thus, on the one hand, the interest rate would be a condition for self-management in expanded reproduction, and on the other hand, from the point of view of the individual work collective, it would be »the rate of national economic efficiency« of the »social capital«. This would set limits for the individual collective, above which extra income occurs as a part of personal income, and under which the accumulation falls to the detriment of personal income — for the work collective this being a warning that the labour force and the means of production in the social reproduction are employed in the wrong place.

2. The second problem of long-term distribution theory in the labour-managed economy (described in characteristics 1—5 and 6b) is »what determines the interest rate«. Can a mechanism exist in the economy for the formation of the interest rate which would force it to the level leading to a natural growth rate, a growth rate which would ensure maintenance of full employment of production capacities and labour force, and which at full employment would also be the main condition for the realization of social-ownership relations.

It has already been mentioned that the work collective, not having appropriate investment projects, would even be forced to leave its savings to others free of charge, as in any other case the interest rate calculation would affect personal incomes. However, in some work collectives there would probably be a demand for savings. Such a demand would undoubtedly arise among unemployed workers, as savings are the only source for the purchase of production means,

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[10] Such dreams were described by Nuti (1978) for instance; among the Yugoslav economists Černe (1971) was the first to form such a dream.

needed by the unemployed workers to employ their labour force. The savings would of course also be supplied at the interest rate by households. With this rate, the supply would then have to be adjusted to the demand for savings on the capital market, which would comprise the seventh characteristic of our reconstruction of the labour-managed economy.

If the obligatory self-financing system of investment functioned (in this system the interest rate (i) determines the investment rate), the conditions on the savings market could be as shown in Figure 2. The higher the surplus of savings demand, the higher the interest rate (i) and also the higher the quantity of the savings supply, due to higher interest rate. This market relation can be indicated:

$$i = a + i_n + f\,[d\,(I/K) - s\,(I/K)] \qquad (13)$$

where (i) is market interest rate, (a) as a constant, is the influence of inter-branch savings demand and supply of households, (i_n) is the interest rate at full employment of production capacities and of labour force, (d (I/K)) and (s (I/K)) are the growth rate of the demand and supply of the labour force, respectively. Both rates should be functions of the investment rate (I/K) and in Figure 2 they are drawn in the lower part of the figure, following the example of Harris (1978).

The upper part of the figure shows the well-known Cambridge equation (12). Inter-branch savings demand and supply have been neglected in the figure.

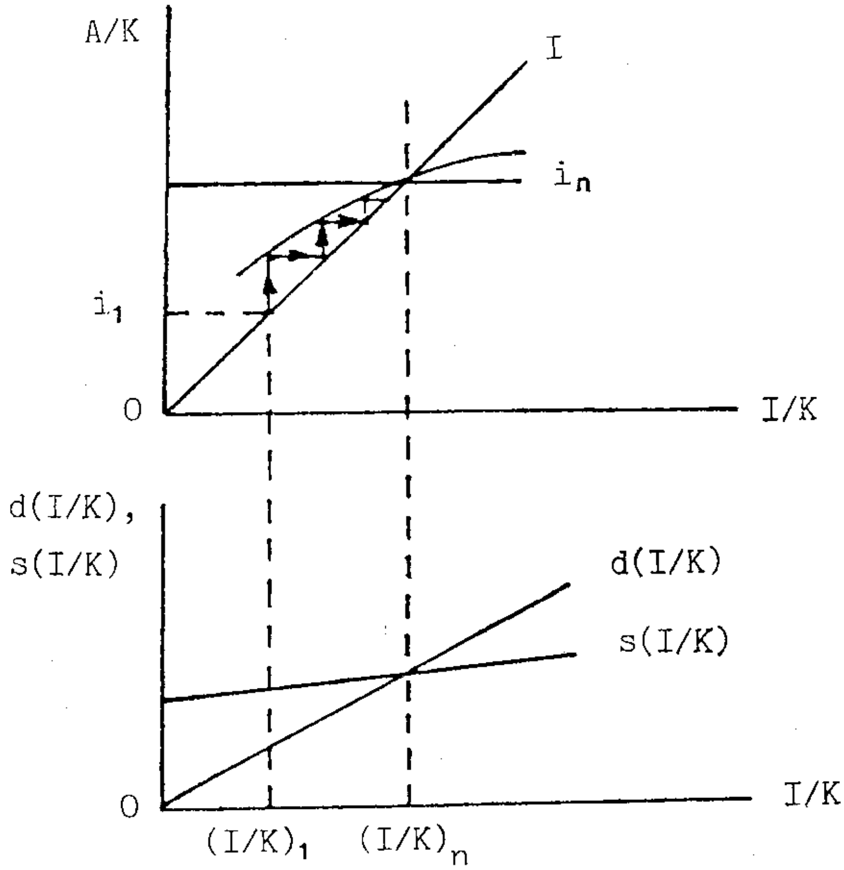

Figure 2

What would occur in the economy if the investment rate was on the level $(I/K)_1$? As the intersection of the curves (s (I/K)) and (d I/K)) means that supply and demand for labour force are increasing at the same speed at full employment of labour, each investment rate on the left hand side of the intersection means that an unemployed labour force is arising in the economy.

Since labour force is not a commodity, the unemployed labour force does not change the level of personal incomes. It would however change the interest rate resulting in a too low investment rate. Namely, the unemployed workers would be willing to raise savings even at an interest rate higher than the existing interest rate (i_1), if the investment rate is $(I/K)_1$. For unemployed workers, it is more sensible to be employed even on the account of lower personal income (being given to employed workers only) as is the case in the economy with an interest rate (i_1). Unemployed workers would thus increase the interest rate up to the full employment level. When a full employment level is reached the growth in interest rate would stop, as there would not be any labour force that would demand additional savings and be employed in production.[11] As already mentioned in the case of external investment financing, employed workers during full employment of labour force (and natural growth respectively) would not be motivated to increase the interest rate.

CONCLUSIONS

1. The distribution model in the labour-managed economy described by the characteristics 1—5, and 6b and 7, hides within itself many theoretical distortions according to already known models of the labour-managed economy, especially neo-classical models of this economy.

a) The interest rate has been defined by the market, yet demand and supply are not based on marginal products of production factors, but are deduced from the laws ruling in the social reproduction (of labour force). Thus the interest rate neither equals the marginal product of capital nor has to be adjusted to them, as if the income distribution system is based on the contributions of production factors to the realized income; and as if, because of physical productivity of the capital, the interest rate produced an additional income for the enterprises and at the same time would be a reflection of time preferences to present consumption as against to the future one. In the model, savings supplies are not determined by time preferences, neither is savings demand determined by marginal products. With the criticism of Neo-Classical theory, all the categories have been lost — the categories needed for that (Neo-Classical) explanation of capital markets, of prices of production factors, and of the distribution in the labour-managed economy.

[11] Growth rate would thus be adjusted not only to labour force growth but also to natural growth, as labour productivity growth frees the labour force as soon as investment rate in the economy is no longer high enough.

b) As the capital market has not been derived from the substitutability of capital and labour, and their marginal productivity, we have also not been forced by capital market determination to accept the so-called labour market, as would have been the case from the point of view of Neo-Classical theory, where the labour market is only the mirror of the capital market. Personal incomes in the model are not the price of labour force and their level is not determined by marginal labour product; it is only a residium in the income distribution, mostly determined by the size of income.

c) As in the model marginal products (those falling) are not needed, so distribution is also not explained by means of Neo-Classical scarcity theory, and thus the interest rate is not an index of scarcity. If the interest rate does indicate the scarcity of capital, then this is not the scarcity according to labour but the »scarcity« of production means from the point of view of possibility of labour reproduction in the economy.

Neither appropriation nor ownership are derived from scarcity. From the private ownership of labour force, from its private reproduction and motive — personal income, the »scarcity« of capital and savings, respectively, are derived. Thus, accumulation is a simple precondition for the labour force reproduction, realized through income distribution, this one also being conditioned by social reproduction.

d) In the model neither optimal nor fair distribution is to be found in the Neo-Classical sense. There is only an equilibrium distribution, that is neither defined optimaly, from the point of view of efficiency of economy and production forces, nor rightfully according to contributions of individual factors of production. It is merely the only way of distribution, which in the labour-managed economy enables an uninterrupted reproduction at a full employment level of production capacities and labour force.

2. In conclusion, from the viewpoint of the distribution model being dealt with in this article, an answer will be provided to the question which has been worrying all economists concerned with the labour-managed economy: »Can a labour-managed economy be an efficient economy at all?« and »Can it be even more efficient than a capitalist economy?« (the latter of course being more important, in order for the labour-managed economy to take effect as a historical alternative to capitalism and state socialism).

The distribution model cannot of course, be a final answer to these two questions. However, a brief comparison with the Post-Keynesian interpretation of the capitalist economy is possible (for example, Harris, 1978). Thus, in the labour-managed economy, in the long term, the interest rate can acquire the force (if the system of investment financing is organized properly — characteristics 6b and 7) to balance investment activity so that, through it, full employment of the labour force is assured, inflationary investment is eliminated, and a normal flow of savings is also assured. At the same time, through the interest rate, social reproduction as a whole becomes subject to labour force reproduction. The interest rate mechanism explained above always away from inflationary as well as from deflationary situations, while the profit motive would stop investment activity a long time before (and maintain long-term unemployment), or would push investment activity into inflationary situations. And in a situation in which neither the growth rates of the labour force nor of labour productivity are positive, total income would be distributed as personal income. Because of this, it is believed that the labour-managed economy, with its tendency towards full employment of the labour force, towards a stable and balanced growth and especially by realizing social reproduction as labour force reproduction, can far exeed the efficiency of the capitalist economy. It must be pointed out, that in many Neo-Classical models of the labour-managed economy, this finding is not acceptable.

Most of the weaknesses of the labour-managed economy are related to short term conditions. It has been realized that the workers' response to increased effective demand is not increased production and increased utilization of productive capacities, but to increase prices, if competition allows this. Through the higher personal incomes derived from price increases, this short term process is renewed. Because of this, there exist in the labour-managed economy a tendency towards inflation, low utilization of productive capacities and under-employment — even in an efficient long-term state. However, according to our analysis, these negative characteristics are more a consequence of our presumption of a low competition rate (non-competitive conditions are less evident in capitalism — see footnote 8) than of the characteristics of labour-managed economy themselves.

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REKONSTRUKCIJA TEORIJE RASPODELE U SAMOUPRAVNOJ SOCIJALISTIČKOJ PRIVREDI NA TEMELJIMA POSTKEJNEZIANSKE EKONOMSKE TEORIJE

Maks TAJNIKAR

Rezime

U jugoslavenskoj ekonomskoj literaturi dobro je poznat model samoupravne socijalističke privrede u kojem centralnu ulogu ima minimalna stopa akumulacije. U članku autor pokušava da rekonstruiše taj model na temeljima postkejnezianske ekonomske literature i analizira njegove glavne osobine.

Glavna osobina analiziranog modela je da se dohodak u privredi deli samo na dva dela: lične dohodke i kamate koje su obračunate na sav kapital u preduzećima i u celini se akumuliraju. U privredi štede i gazdinstva i to iz ličnih dohodaka i iz kapitalnih dohodaka. Autor pokazuje da se i u takvom modelu ekonomije prosečna sklonost ka štednji menja sa promenama u raspodeli dohodka između gazdinstava i preduzeća, odnosno između ličnih dohodaka i kamata, te da postoji samo jedna raspodela dohotka koja odgovara »prirodnom rastu« u toj privredi.

U daljoj analizi autor polazi od pretpostavki (a) da u analiziranom modelu privrede radna snaga nije roba, nema svog tržišta i lični dohoci nisu cena radne snage (međutim, radna snaga se još uvek alocira tržištem) i (b) da je osnovni motiv privređivanja u tom modelu prvobitan motiv sarađivanja radnika u proizvodnji, a to su lični dohoci. Autor prvo analizira raspodelu dohodka u kratkom roku i utvrđuje da će radnici na veću efektivnu tražnju odgovarati višim cenama a ne većim korišćenjem kapaciteta sve dok uvažavaju lične dohotke kao svoj motiv privređivanja i dok u privredi vlada oligopolna konkurencija. Takvo ponašanje radnika na kratki rok po autorovom uverenju nije samo posledica oligopolne konkurencije. Autor dokazuje da bi u istim konkurentnim uslovima kapitalisti motivisani profitom reagovali racionalnije. Razlike u ponašanju kapitalista i radnika kao vlasnika u procesu proizvodnje proističu iz promena osnove kojom mere realizaciju svog motiva privređivanja: broj zaposlenih se manja sa promenama u korišćenju kapaciteta, a obim kapitala (iz profitne stope) ostaje isti.

U dugoročnoj analizi autor razmatra uticaj investicione aktivnosti na raspodelu dohotka. Prvo pitanje, na koje autor odgovara, je da li može kamatna stopa neposredno uticati na visinu investicione stope. Autor zaključuje da je kod eksternog finansiranja investicione delatnosti taj uticaj slab. Situacija se, međutim, menja ako radni kolektivi moraju obračunati kamate na sav kapital sa kojim raspolažu, a posle kamate upotrebiti za povećanje tog kapitala. Kamatna stopa tada ne samo deli dohodak radnih kolektiva prema organskom sastavu »njihovog« kapitala, nego ih tera da investiraju po stopi koja je jednaka kamatnoj stopi. U suprotnom, morali bi u budućnosti platiti kamate na račun potencijalnih ličnih dohodaka. Sistem bi morao biti dopunjen mogućnošću beskamatnog odstupanja štednje (kamata) kao alternative za one radne kolektive koji nemaju vlastitih investicionih projekata. Po autorovom mišljenju predstavljen investicioni sistem osigurao bi uravnoteženost investicija i štednje na nivou privrede, a istovremeno bi očuvao preduzetničku samostalnost. Drugo pitanje na koje autor odgovara u dugoročnoj analizi je, šta određuje visinu kamatne stope. Autor zagovara tržište kapitala, na kojem bi mogućnost da nezaposleni radnici formiraju tražnju za akumulacijom ravnopravno sa zaposlenim radnicima usmeravala usklađivanje investicione stope sa »prirodnim rastom«.

Na kraju autor zaključuje da je moguće rekonstruisati model samoupravne socijalističke privrede bez upotrebe teorijski spornog oruđa analize neoklasičke sinteze i da je moguće tim putem doći do modela samoupravne socijalističke privrede, koja bi barem na dugi rok bila efikasnija od kapitalističke privrede.