

Eksistenca možne in optimalne rešitve zvezno-variabilnega dinamičnega linearnega programa v posplošeni obliki — The Existence of Feasible and Optimal Solutions of a Continuously Variable Dynamic Linear Program in a Generalized Form

Viljem RUPNIK 527

Matrica pokazatelja poslovnog uspeha osnovne organizacije udruženog rada — Matrix of Indicators of Business Results of the Firm

Dušan STANKOVIĆ 539

CHRONICLE

Transition to Workers' Self-Management in Industry as a Strategy for Change in Developing Countries

Gerard KESTER
Henk THOMAS 555

DOCUMENTS

Observations on Actual Social-Economic Problems of Peru

Branko HORVAT 559

BOOK REVIEWS

Thomas Eger: *Das Regionale Entwicklungsgefälle in Jugoslawien*

Jurij BAJEC 569

Milena Jovičić: *Ekonometrijski metodi*

Zlatko KOVAČIĆ 572

Savez republičkih i pokrajinskih samoupravnih interesnih zajednica za naučni rad u SFRJ učestvuje u troškovima izdavanja ovog časopisa.

CLANCI — ARTICLES

ECONOMIC ANALYSIS AND WORKERS'
MANAGEMENT, 4, XV (1981), 433-444

INCOME DISTRIBUTION, PRICES AND CHOICE OF TECHNIQUE IN THE LABOUR-MANAGED ECONOMY

Pavle PETROVIĆ*

INTRODUCTION

In this paper we shall consider some forms of income distribution that are suggested as relevant in the labour-managed market economy, in order to find their implications for choice of technique. The different forms of income distribution that are going to be considered imply different types of equilibrium prices. Some of them are proposed to be the normal prices in the labour-managed economy. We shall assess these competing concepts of normal prices from the choice of technique standpoint.

The concept of the production function is widely used while considering these problems, and the result, stating that the worker-managed firm and therefore the economy chooses the capital-intensive technique, has been reached. So we shall start with a reconsideration of the production function approach, and afterwards the main topics of this paper will be examined.

I. CHOICE OF TECHNIQUE, RELEVANCE OF THE PRODUCTION FUNCTION APPROACH¹

The worker-managed firm, it is often stated, maximizes net income per worker.² Although there is no consensus on that matter, we shall follow this line and consider the implications for choice of technique.

The problem is then stated as follows. Given a production function with two variable inputs, labour (L) and capital good (K),

$$S = F(K, L)$$

* Faculty of Economics, Belgrade University. This paper was presented at the International Conference on the Economics of Self-Management held in Istanbul, 16-18 July 1980.

¹ A similar argument, in the meantime, was made in M. Jarsulić: "Worker-management and the choice of technique" *Cambridge Journal of Economics*, September, 1980.

² J. Vanek: *The General Theory of Labour-Managed Market Economies*, Cornell University Press, Ithaca and London, 1970, p. 21.

The worker-managed firm maximizes net income per worker

$$y = \frac{pF(K,L) - (1+r)p_k K}{L}$$

where p is the price of product, p_k price of the capital good and r interest rate. One can then determine the optimal capital to labour

ratio in the worker-managed firm $\left(\frac{K}{L}\right)_y$ under constant returns to scale. Comparing this ratio with the optimal one of the corresponding

profit-maximizing firm: $\left(\frac{K}{L}\right)_{pf}$ it can be shown that $\left(\frac{K}{L}\right)_y > \left(\frac{K}{L}\right)_{pf}$

if the net income per worker (y) in the former is larger than the wage rate (w) in the latter firm: $y > w$, i.e., when there are positive profits. The conclusion is then drawn that the worker-managed firm uses more capital than necessary, and therefore the whole economy as well, which implies their inefficiency. It will be shown that this result, in general, does not hold.³

Let us consider a two sector stationary economy producing consumption (A) and capital good (K). All firms within sector A are using the same technique; so do the firms in sector K. Net income per worker of the firms in sector A, for unit production, is equal to:

$$y_a = \frac{1 - (1+r)p_k K_a}{l_a}$$

The consumption good is taken as the numéraire, so p_k is the price of the capital good in terms of consumption goods, r is the interest rate (or rate of accumulation), K_a and l_a are the input coefficients of capital good and labour per unit of consumption good produced. The corresponding income of the firms in the capital-producing sector is

$$y_k = \frac{p_k - (1+r)p_k K_k}{l_k}$$

where K_k and l_k are input coefficients in the second sector, i.e., the sector uses labour and capital good to produce the same capital good. The capital good lasts one period in both sectors. As the net income per worker is maximized, it should be, at the equilibrium, equal among sectors, i.e., $y_a = y_k$, and we end up with two price equations:

³ B. Horvat has already questioned this result, see B. Horvat: "Self-Management, Efficiency and Neoclassical Economics", *Economic Analysis and Workers' Management* 1-2, 1979, pp. 171, 172. We shall do it as well, but the adopted approach will be different.

$$1 = y l_a + (1+r)p_k K_a$$

$$p_k = y l_k + (1+r)p_k K_k$$

(1)

They are the same as the equations which determine prices in a profit-maximizing case except that the wage rate (w) is replaced by the net income per worker (y). Therefore, there is the unique relationship between the net income per worker y and the rate of interest r .⁴ The relation is determined by the set of input coefficients (l_a, K_a, l_k, K_k), i.e., by the technique of production. Different capital goods can be used in production of the consumption good A, i.e., there are different techniques to choose from. For the given rate of interest, the technique which maximizes the net income per worker will be chosen, on the one hand, and the given wage rate profit maximization technique will be chosen, on the other.

The choice of technique problem could be presented in Figure 1 where two techniques are considered: I and II with corresponding relationship between y or w and r .

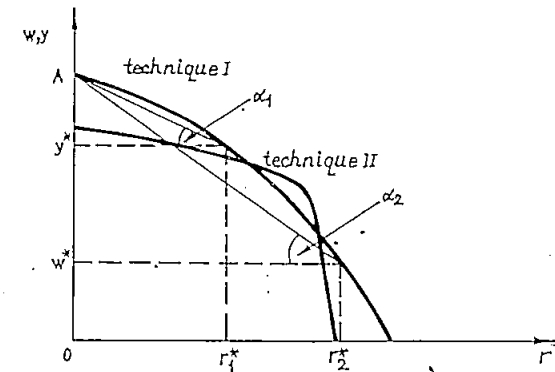


Figure 1

If the given interest rate in the worker-managed economy is r_1^* , technique I will be chosen because it gives the maximum net income per worker (y^*). Next, let us suppose that the wage rate, in the capitalist economy, is given and equal to w^* ($< y^*$), then the profit maximization technique is technique I.

Now if we want to compare the capital intensity of two economies, we should use the value of capital (I) per unit of labour $k = (I/L)$. It can be easily shown that the capital intensity in the worker-managed

⁴ The w - r relationship in the model we are considering is given in: P. Garegnani: "Heterogeneous Capital, the Production Function and the Theory of Distribution" *Review of Economic Studies*, vol. 37, 970.

Also in E.K. Hunt, J.G. Schwartz, ed: *A Critique of Economic Theory*, Penguin Books, 1972, p. 248.

economy is $k_1 = \frac{Ay^*}{Or_1^*}$, and $k_2 = \frac{Aw^*}{Or_2^*}$ in the capitalist economy.⁵ In

our example $k_1 < k_2$, so the worker-managed economy could be less capital intensive than the capitalist one, even when $y > w$. The difference comes about, although the same technique is used, because the two different sets of prices correspond to the two different distributions of net product (i.e. $y > w$).

Let us now compare the firms in two economies belonging to the same sector. In our example, the firms in both economies use the same technique so they have the same capital intensity measured in physical terms.

So we have obtained a counter-example, i.e., when $y > w$ one can get at the same time (1) the higher value of capital per worker ratio for the profit-maximizing economy, and (2) that the same technique is chosen by the firms in both cases, implying the same capital intensity measured in physical terms. Both results contradict the conclusion previously stated that the worker-managed economy and firm use more capital than necessary.

The example could be made more general, i.e., to include more than two sectors and many techniques to choose from, and it is sufficient that the same technique returns at the higher interest rate (i.e., double-switching).⁶

II. INCOME DISTRIBUTION AND THE CHOICE OF TECHNIQUE

So far we have considered a stationary state. But worker-managed firms save part of the income in order to invest. Therefore, when considering income distribution in the worker-managed economy, one should switch from a stationary state to a growing economy. Then the rate of accumulation, instead of the interest rate, appears as the relevant parameter in price equations (1).

Let us consider a steadily growing economy; one can then define the quantity equations that are dual to the previously-defined price equations (1). They are⁷

$$\begin{aligned} I &= t_k(1+g)T + t_c c \\ T &= K_n(1+g)T + K_c c \end{aligned} \quad (2)$$

The system is normalized in such a way that all quantities are given per unit of total labour employed in the economy, i.e., T — physical stock (number) of capital goods in use relative to labour, c the output

⁵ Ay^* and Aw^* are profits per worker and Or_1^* and Or_2^* are profits per unit of capital in two cases. Therefore, the corresponding ratio is equal to capital per worker; $k_1 = \tan \alpha_1$, $k_2 = \tan \alpha_2$.

⁶ One can use P. Garegnani's example in Appendix pp. 281—283, op. cit.

⁷ L. Spaventa: "Rate of Profit, Rate of Growth, and Capital Intensity in a Simple Production Model" *Oxford Economic Papers*, 1970, No. 2.

of consumption goods per unit of labour and, as we consider now the whole economy consisting of only two sectors, it also coincides with consumption per worker; g is the steady growth rate. Again a unique relationship can be found between consumption per worker and growth rate. It turns out that it has the same parametric form as the net income per worker — rate of accumulation relationship, with a consumption per worker in place of a net income per worker and a growth rate instead of a rate of accumulation. So one can plot these relationships for the simple two-technique case in the following way⁸.

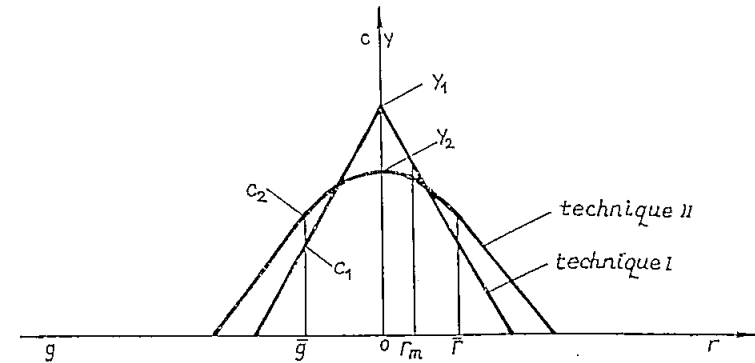


Figure 2

Let us consider for the moment the "quantity system" and determine the growth rate of economy (\bar{g}) in such a way to be equal to the exogenously-given growth rate of the labour force (n), i.e., $\bar{g} = n$. The question of the choice of technique then arises, and a criterion of efficiency can be adopted, i.e., the technique which maximizes the consumption per worker for the given growth rate (\bar{g}) should be chosen.⁹ In Figure 2, for the given growth rate \bar{g} , technique II is superior, i.e., $c_2 > c_1$.

The choice of technique in the "quantity system" requires centralized planning and, of course, its application would be extremely labourious. We are considering the labour-managed market economy, therefore the choice of technique is decentralized, and the question arises of whether it will coincide with the criterion of efficiency. As a matter of fact, we are going to consider three rules of income distribution and the corresponding choice of technique, and then each of them will be assessed from the standpoint of the criterion of efficiency. These rules regulate only the ways of income distribution, but the total

⁸ L. Spaventa op. cit., p. 144, figure 6.

⁹ L. Pasinetti: *Lectures on the Theory of Production*, Columbia University Press, New York, 1977, p. 222.

income remains at the disposal of the worker-managed firm, i.e., the part of income which it must save may be invested in whatever project is desired.

1. Let us first consider the case where there is no exogenously-determined rate of accumulation (interest), i.e., $r = 0$. The worker-managed firm will then maximize total income per worker, and it will accordingly choose the technique. In Figure 2, technique I will be chosen for it secures a larger total income per worker, i.e., $Y_1 > Y_2$. This would be in the general case the correct choice (one that maximizes consumption per worker) only if the economy is not growing, i.e., for the stationary state ($g = 0$). If it has to grow at the rate \bar{g} (to match the growth of labour force), then the investment should be $p_k \bar{g} T$ and the economy should generate the same amount of savings. The saving function of the worker-managed firm, corresponding to the case we are considering, is:

$$S = s Y \quad (3)$$

i.e., a constant fraction of total income per worker is saved (accumulated). At the equilibrium, the total income per worker is the same among the sectors, and if some amount of savings is desired, it will be generated in such a way as to leave net income (total income minus savings) per worker the same among the sectors. The saving function (3) fulfills that requirement. The long-run equilibrium will then be secured if there is equality between savings and investment:

$$p_k \bar{g} T = s Y$$

$$\bar{g} = s \frac{Y}{p_k T} \quad (4)$$

Therefore s , the average propensity to save out of the total income per worker, should be fixed at a level consistent with the growth rate of labour force.¹⁰ This can be done by means of a self-management agreement on income distribution.

Choice of technique remains to be considered; Figure 2 immediately shows that, for the given growth rate \bar{g} , an inferior technique is chosen, i.e., technique I. That choice involves a loss of consumption per worker equal to: $c_2 - c_1$. Figure 2 also shows that for some other growth rates, certainly less than \bar{g} , maximization of total income per worker can lead to correct choice of technique, i.e., one which also maximizes the consumption per worker. This is due to discreteness, i.e., the same technique is superior for certain intervals of growth rates. When the number of techniques to choose between are large this could hardly happen, and in that case the more important excep-

¹⁰ It can be determined as the function of the given growth rate and the parameters of the system (1) independently of prices.

tion is due to the return of techniques. This is important if one wants to consider a second-best solution. We may conclude that in any relevant situation — many techniques which return or not, maximization of total income per worker will lead to the wrong choice of technique, except by chance only.

2. The second rule of income distribution suggests that a minimal rate of accumulation (r_m) should be determined in advance, by a self-management agreement, for instance. The worker-managed firm will then maximize net income per worker, but it is expected that part of that income is going to be saved, otherwise r_m will not be a minimal but a real rate of accumulation. Again, one should consider the corresponding saving function, and we suggest that the following one is relevant:

$$S = r_m p_k T + s_y y \quad (5)$$

Part of savings is predetermined by a minimal rate of accumulation ($r_m p_k T$) and a constant fraction of the net income per worker is saved, the argument being the same as in the previous case, i.e., same s_y among the sectors ensures the same personal incomes when net incomes per worker (y) are equal. The long-run equilibrium requires savings to be equal to investment, i.e.,

$$p_k \bar{g} T = r_m p_k T + s_y y$$

$$\bar{g} = r_m + s_y \frac{y}{p_k T} \quad (6)$$

Again, for the growth rate \bar{g} there is a given value of s_y ¹¹ so in this case a self-management agreement should reappear for the second time, fixing s_y .

When the choice of technique problem is considered, one should notice that, by definition, $\bar{g} > r_m$. Once again, we can use Figure 2 and choose any r_m that is smaller than \bar{g} . In our example, r_m is such that technique I is chosen, i.e., the technique which maximizes net income per worker for that rate of accumulation (r_m). And again it is the wrong choice from the efficiency criterion standpoint. But certain differences arise compared with the previous case, i.e., r_m could be varied, the only limitation being $r_m < \bar{g}$, so if it is enlarged a bit technique II will be chosen and one will get the correct choice for the unchanged growth rate: \bar{g} . It seems that we have found the second-best solution, i.e., let r_m be close to \bar{g} and it is quite probable that the correct technique will be chosen. But this is not the case if one considers the large number of techniques which is the only relevant situation. Then if techniques return, the second-best solution might be: let r_m be very low, i.e., substantially different from \bar{g} , then the correct choice will be made if

¹¹ Again $s_y = f(\bar{g})$ independently of prices.

the same technique dominates others at very low and at high levels of r and g . Therefore, the conclusion should be drawn that maximization of net income per worker given a minimal rate of accumulation will result in the wrong choice of technique, again except by chance.

3. The third rule refers to the case where the whole amount of savings (accumulation) comes via a predetermined rate of accumulation \bar{r} :

$$S = \bar{r} p_k T \quad (7)$$

and the whole net income per worker, which is maximized, goes to personal incomes. In the long-run equilibrium, the equality between investment and savings should be satisfied, i. e.,

$$\frac{\bar{g} p_k T}{\bar{g}} = \frac{\bar{r} p_k T}{\bar{r}} \quad (8)$$

and the familiar result is obtained that rate of accumulation should be equal to the rate of growth. Therefore, the exogenously-given growth rate of the labour force n determines the growth rate of production \bar{g} and the latter determines the rate of accumulation (\bar{r}), which should be fixed by a self-management agreement on income distribution. For the given rate of accumulation, net income per worker will be maximized and the corresponding technique will be chosen. Figure 2 shows that technique II is chosen, i.e., the technique which, at the same time, maximizes consumption per worker for the given growth rate g . In a general case, i.e., a large number of techniques regardless of whether they reswitch or not, maximization of net income per worker for the given rate of accumulation, which is equal to the growth rate: $\bar{r} = \bar{g}$, secures the correct choice of technique from the efficiency criterion standpoint.

III. CORRESPONDING PRICE SYSTEMS

Different types of equilibrium prices are consistent with the rules of income distribution just considered.

1. When there is no predetermined rate of accumulation ($r = 0$) and total income per worker (Y) is maximized, the price system (1) will reduce to

$$I = Y l_a + p_k K_a \quad (1')$$

$$p_k = Y l_k + p_k K_k$$

and we get value prices, i. e., the prices that are proportional to labour embodied as the equilibrium prices. The results of part II suggest that the value price is relevant only for a stationary state, for then it chooses the correct technique. In the steadily growing economy, the

wrong technique will be chosen. Another problem arises from the fact that reallocation of savings from the more to the less labour-intensive sectors should take place in order to sustain the steady growth of all sectors. Relation (4), and correspondingly determined s , only ensures enough savings on the level of economy, but there still remains the question of the mechanism that will reallocate the savings from those who have more to those who have less than needed for steady growth. Therefore, if the value price is to be the normal price of the labour-managed market and growing economy, then the wrong technique will be chosen and an additional mechanism for reallocation of savings should be built in.

2. The exogenously-determined minimal rate of accumulation, which can be varied within certain limits ($0 < r_m < \bar{g}$), together with the maximization of net income per worker, will lead to so-called "two-channel prices".

$$I = (1 + m) y l_a + (1 + r_m) p_k'' K_a \quad (1'')$$

$$p_k'' = (1 + m) y l_k + (1 + r_m) p_k'' K_k$$

where $m = 0$ if $r_m = \bar{r} (= \bar{g})$, so y is the equilibrium net income per worker corresponding to the rate of accumulation \bar{r} . The case we are interested in is $r_m < \bar{r}$ and it can be obtained for $m > 0$; $(1 + m)y$ is then the equilibrium net income per worker corresponding to r_m . Therefore, by varying the parameter m we can vary r_m from zero to \bar{g} , and for each case one gets the corresponding vector of equilibrium prices. If any of these prices is to be the normal price in the economy we are considering, then the wrong technique will be chosen and the mentioned mechanism should be built in, although in this case the amount of savings to be reallocated could be considerably smaller.

3. The case with a fixed rate of accumulation equal to the growth rate, i. e., $\bar{r} = \bar{g}$, corresponds to the following production prices:

$$I = y l_a + (1 + \bar{r}) p_k''' K_a \quad (1''')$$

$$p_k''' = y l_k + (1 + \bar{r}) p_k''' K_k$$

In the steadily growing economy where net income per worker is maximized, this type of equilibrium price will ensure the correct choice of technique and, at the same time, the proper allocation of savings so that no additional mechanism is needed.

Digression: *income price*. There is one more type of equilibrium price-income price that is suggested to be the normal price in the labour-managed market economy.¹² It differs from the previously-considered concepts of equilibrium prices in two respects. First, income

¹² M. Korać: "The Law of Value as the Regulator of Income Distribution in the Socialist System of Commodity Production" (in Serbo-Croatian), Belgrade, 1970.

price does not correspond to any particular form of income distribution, and second, it implies that the worker-managed firm maximizes income rate (d') defined as the ratio between the total income and the corresponding expenditure of labour (embodied and current).¹³ Therefore, the price equations are:¹⁴

$$p_a^* = p_k^* K_a + d' (p_k^* K_a + l_a) \quad (9)$$

$$p_k^* = p_k^* K_k + d' (p_k^* K_k + l_k)$$

where p_a^* and p_k^* are the income prices of the consumption and the capital good in terms of labour, d' the equilibrium income rate, so that $d' (p_k^* K_a + l_a)$ is the average income, in the first sector, which is proportional to the corresponding expenditure of labour: embodied ($p_k^* K_a$) and current (l_a); the same is the case in the second sector.

Again, we want to assess this type of equilibrium price from the choice of technique standpoint. In order to do that, we should change the numéraire and to express the income price of the capital good in terms of the consumption goods (\bar{p}_k):

$$1 = \bar{p}_k K_a + d' (\bar{p}_k K_a + Y l_a) \quad (9')$$

$$\bar{p}_k = \bar{p}_k K_k + d' (\bar{p}_k K_k + Y l_k)$$

where Y is, as before, the total income per worker that appears in the value price system ($r = 0$). The system (9') could be written as follows:

$$1 = d' Y l_a + (1 + d') K_a \bar{p}_k \quad (9'')$$

$$\bar{p}_k = d' Y l_k + (1 + d') K_k \bar{p}_k$$

and one can see that there is a purely formal similarity between the two price systems: (1) and (9'), if we state that $y = d' Y$ and $r = d'$. It follows that, from the formal point of view, the price system (9) is the special case of the system (1) with the additional relationship $y = Yr$, i.e., in Figure 2 it would be the half-line through the origin with the slope Y . For two techniques there are two different lines with slopes Y_1 and Y_2 , and each of them cuts the corresponding curve (or line) in Figure 2, so one can read the values of r (formally equal to d'), and the technique which gives the higher $d' (= r)$ will be chosen. What we are interested in is whether $d' = r (= g)$, i.e., whether the choice is correct from the criterion of efficiency standpoint.

¹³ This is the correct definition when there is no fixed capital, i.e., the case we are considering, but a generalization is possible.

¹⁴ P. Petrović: "Transformation of Value into Income Price" (in Serbo-Croatian) *Ekonomist* 1—2, 1974.

At this point we can refer to the empirical result¹⁵ stating that the equilibrium income rate is $d' = 22\%$, i.e., equal to the value which considerably exceeds any reasonable long-run growth rate. Therefore, one can conclude that in the general case $d' > r (= g)$, and if the income price is to be the normal price in the labour-managed economy, the wrong technique will be chosen. For steady growth of all sectors the reallocation of savings from the less to the more labour-intensive sectors should take place, and the corresponding mechanism should be built in.

Received: 26. 6. 1981.

Revised: 3. 10. 1981.

RASPODELA DOHOTKA, CENE I IZBOR TEHNIKE U SAMOUPRAVNOJ PRIVREDI

Rezime

U radu se prvo razmatra rezultat da će samoupravna firma, a time i privreda, koristiti kapitalno intenzivniju tehniku nego kapitalistička firma (i privreda) kada ova druga prisvaja pozitivan profit (tj. neto dohodak po radniku veći od nadnice). Korišćenjem rezultata da vrednost kapitala zavisi od raspodele, i da se ista tehnika može ponovo javiti pri višoj kamatnoj stopi (Cambridgeske kontraverze u teoriji kapitala) pokazana je mogućnost da istovremeno imamo: (1) veću kapitalnu intenzivnost (vrednost kapitala po radniku) u kapitalističkoj privredi i (2) istu kapitalnu intenzivnost, fizički merenu, u obe razmatrane firme. Oba ova rezultata protivreče prethodno iznetom, a time i njegovoj implikaciji da će samoupravna privreda koristiti više kapitala nego što je neophodno, što bi podrazumevalo njenu neefikasnost.

Zatim se ocenjuju neka pravila raspodele dohotka i njima odgovarajuće ravnotežne cene sa stanovišta tehnike koju biraju. Da bi se to učinilo neophodno je definisati kriterijum, i u ovom radu se koristi kriterijum efikasnosti koji traži da se pri zadatoj stopi rasta (g) bira tehnika koja maksimizira potrošnju po radniku.

Odluke o izboru tehnike u samoupravnoj robnoj privredi donose se decentralizovano; izbor vrši samoupravno preduzeće (OOUR) maksimizirajući neto dohodak po radniku. Različita pravila raspodele dohotka imaju različite implikacije na izbor tehnike, te se pitamo koje će od njih voditi pravilnom izboru tehnike sa stanovišta kriterija efikasnosti. Razmatrana pravila su sledeća: 1. nema unapred određene stope akumulativnosti i konstantni udeo dohotka po radniku se izdvaja za akumulaciju; 2. Unapred je data minimalna stopa akumulativnosti (τ_m) i

¹⁵ Income prices are computable from input-output and capital-output coefficients as the special case of two-channel prices. See:

P. Petrović: *Equilibrium Growth and Prices*, (in Serbo-Croatian), Institute for Industrial Economics, Belgrade, 1979, p. 98 and pp. 106—8.

očekuje se da će i jedan deo neto dohotka po radniku biti akumuliran; 3. celokupna akumulacija se obezbeđuje preko unapred određene stope akumulativnosti (\bar{r}). Odgovarajuće ravnotežne cene su 1. vrednosne cene, 2. dvokanalne cene (tj. r_m može da varira između 0 i \bar{r}) i 3. cene proizvodnje sa stopom akumulativnosti (\bar{r}) jednakoj stopi rasta (\bar{g}) tj. $r = \bar{g}$. Pokazuje da se samo u trećem slučaju vrši pravilan izbor tehnike, tj. bira se ona tehnika koja za datu stopu rasta (\bar{g}) daje maksimalnu potrošnju po radniku. Razmatrane su takode i dohodne cene, iako one ne podrazumevaju neko posebno pravilo namenske raspodele, i utvrđeno je da i one biraju pogrešnu tehniku.

FIKSNI KAPITAL, NEGATIVNE RADNE VREDNOSTI I IZBOR TEHNIKE*

Mirosljub LABUS**

§ 1. UVOD

Povod ovom članku je Steedmanova analiza fiksnog kapitala kod Marxa (Steedman, 1977). Krajnja namera je, međutim, nešto šira; želeli bismo da u modelu fiksnog kapitala, koji se tretira kao vezani proizvod, ukažemo na vezu između izbora tehnike i tipa normalne cene. U tim razmerama rezultati analize prelaze horizont kapitalističke privrede.

Osnovna Steedmanova namera je bila da pokaže:

(i) da za određivanje profitne stope i cene proizvodnje u kapitalizmu nisu neophodne radne vrednosti roba; dovoljno je poznavati fizičke uslove proizvodnje i visinu realnih najamnina.

(ii) Stavši, u modelu proizvodnje sa fiksnim kapitalom obrnuti red uzročnosti vredi: potrebno je prvo odrediti profitnu stopu, pomoću koje će se izabrati odgovarajuća tehnika proizvodnje, pa je tek potom za tu tehniku proizvodnje moguće odrediti radne vrednosti roba.

Svakom obrazovanom ekonomisti prvi stav je nesporan. Radne vrednosti zaista nisu neophodne da bi u višesektorskim modelima privrede odredili cene proizvodnje. Protezanje tog rezultata sa modela optičajnog kapitala na model sa fiksnim kapitalom valjalo je i očekivati.

Međutim, drugi stav je sporan. U Steedmanovom argumentu on je imao posebnu funkciju. Trebalo je, naime, da pridoda svoju težinu pret hodnom stavu o nepostojanju veze između radnih vrednosti i cena proizvodnje. Njeno odsustvo je bilo zasnovano na analitičkom rezultatu koji pokazuje da je za istu tehniku proizvodnje moguće da uporedno postoje i negativne radne vrednosti i pozitivne cene proizvodnje. Kako se ne može logički podržati izvođenje pozitivnih cena proizvodnje iz negativnih radnih vrednosti, to je nužno bilo zaključiti da između jednih i drugih ne postoji ona veza, koju je Marx imao u vidu.

* U nešto izmenjenom obliku ovaj rad je izložen na sastanku Jugoslovenskog naučnog seminara za ekonomsku teoriju (JUNASET) 29. maja 1981. g. Zahvaljujemo na korisnim primedbama B. Horvatu, P. Petroviću, N. Matesu, D. Cvjetičaninu, B. Ceroviću, A. Vahčiću, N. Zeliću i I. Gjeneru.

** Pravni fakultet, Beograd.