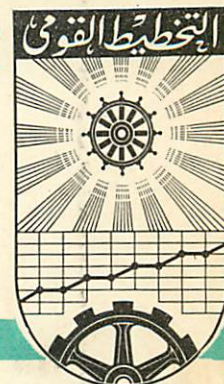


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SOME REMARKS ON THE PROBLEM
OF PRICING IN THE SOCIALIST ECONOMY.

by

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forming the framework of the price policy of the socialist state. This principle has important consequences, because it establishes the necessary relations between the prices of consumption goods and the level of nominal wages, and between the prices of investment goods and the amount of investment funds accumulated mainly from the gross benefit of the socialist enterprises.

The second principle of the price policy is the necessity to cover the costs of production with prices, this being a condition of the financial independence of producers and a condition of every economic calculation of the efficiency of production, investments etc.

The framework of the state price policy, resulting from the two mentioned principles is, however, broad enough to allow to establish very different relations between the prices of different goods, especially between the prices of consumption commodities and of production goods.

Let us consider the limits within which the prices may be established by observing our two principles, on a very simple model of a socialist economy, including two productive sectors (sector I producing the means of production, i.e., the investment goods and materials for the intermediate consumption as well, and sector II producing exclusively consumption commodities), individual consumers earning incomes exclusively as wages, and the state budget accumulating all financial funds for investments and for collective consumption.

Let us assume, that within a given time period the output of production goods amounted to (c) physical units, which have been appropriated as follows:

the intermediate consumption in sector I = a units
the intermediate consumption in sector II = b units
investments = 1 units

Within the same period the output of consumption goods amounted to (z) physical units, which have been distributed as follows:

for the consumption of workers in sector I = u units
 for the consumption of workers in sector II = w units
 for collective consumption = s units

We assume that the average price for a unit of consumption good has been established as p_2 . (p_2 may also indicate the index of current prices of consumption goods related to their constant prices, if quantities (u), (w) and (s) are expressed in constant prices), and we want to calculate the limits within which the average price for a unit of production goods may change under the following conditions:

- 1) All prices have to cover at least the costs of production.
- 2) The monetary demand have to be equal to the nominal supply.

The expenditures on collective consumption and on investments have to be covered by benefits earned in both sectors of our model. So we introduce supplementary indicators:

m_1 = the benefit of enterprises of sector I
 m_2 = the benefit of enterprises of sector II.

According to our assumptions, monetary revenues and expenditures of both sectors and of the state budget may be expressed by the equations (p_1 indicates the average price on production goods):

$$\text{Sector I : } ap_1 + up_2 + m_1 = cp_1$$

$$\text{sector II: } bp_1 + wp_2 + m_2 = zp_2$$

$$\begin{array}{l} \text{the state} \quad m_1 + m_2 = ip_1 + sp_2 \\ \text{budget} \end{array}$$

Assuming that the average price on consumption goods p_2 has been established at the level assuring the equality between monetary demand and supply of consumption goods:

$$up_2 + wp_2 + sp_2 = zp_2$$

and thus considering p_2 as an invariable in our model, we can calculate the lowest admissible level of the average price on production goods $q = p_1$, by which no benefit would be earned by the sector I (so $m_1 = 0$) ; q is at level

of average prices of production goods, at which merely the costs of production of sector I are covered and consequently, all the gross benefit has to be concentrated in sector II.

Transposing q for p_1 in the equation of monetary revenues and expenditures of sector I, and assuming $m_1 = 0$, we get the following equation:

$$aq + up_2 = cq$$

from which :

$$cq - aq = up_2$$

$$q (c - a) = up_2$$

$$q = \frac{up_2}{c-a}$$

This value of q indicates the lowest admissible level of the average price of production goods, and may be defined as the relation of the loan fund in sector I to the surplus of the production of the sector I over the intermediate consumption of production goods within the sector I .

In a similar way we can calculate the highest admissible level of the average price on production goods $q' = p_1$, at which no benefit would be earned by sector II (so $m_2 = 0$), and at which the invariable average price of consumption goods p_2 would only cover the costs of production in sector II . Assuming $m_2 = 0$, and transposing q' for p_1 in the equation of the monetary revenues and expenditures of the sector II, we get the following equation:

$$bq' + wp_2 = zp_2$$

from which:

$$bq' = zp_2 - wp_2$$

$$q' = \frac{zp_2 - wp_2}{b}$$

In words, the maximum admissible level of the average price of production goods is determined by the relation of the surplus of the production of consumption goods over the loan fund in sector II, to the intermediate consumption of production goods within sector II.

In consequence, every level of the average price on production goods, according with our two general principles, must be closed in following limits:

$$\frac{zp_2 - wp_2}{b} \gg p_1 \gg \frac{up_2}{c-1}$$

In order to get an idea about how wide these limits could be, let us assume at the starting point that the average prices of consumption goods and of production goods include an equal rate of profit (r), calculated in relation to the loan fund (according to the Marxian principle, that only the non-paid labour is the source of the surplus value, and thence of the benefit). So, we assume that:

$$r = \frac{m_1}{up_2} = \frac{m_2}{wp_2}$$

and thence $m_1 = rup_2$

Transposing this value of m_1 into the equation of the sector I, we get the following equation:

$$ap_1 + up_2 + rup_2 = cp_1$$

from which:

$$p_1 (c-a) = up_2 (1+r)$$

$$p_1 = \frac{up_2 (1+r)}{c-1}$$

Thence the relation between the formerly calculated lowest admissible level of the average price on production goods (q). and above calculated its "normal" level (including the average rate of profit) may be established as follows:

$$\frac{q}{p_1} = \frac{up_2 (c-a)}{up_2 (c-a)(1+r)} = \frac{1}{1+r}$$

If the rate of profit calculated in relation to the loan fund, were equal to 100% (and such a rate is not far from the level observed in practice at present in European socialist countries), the relation $q:p_1$ would amount to:

$$\frac{q}{p_1} = \frac{1}{1+1} = \frac{1}{2}$$

This means that the "normal" average prices of production goods by such a rate of profit have to be reduced to their half for the profit from sector I to disappear. It proves, at the same time, that the limits within which prices of production goods may be established according to the two general principles of the price policy, by given average prices of consumption goods, are still very wide and may include very different systems of pricing.

2. The systems of prices existing in practice and the discussion about the "basis prices".

In the Soviet Union, during the implementation of the first two five-years plans (about thirty years ago), the so-called "two level" system of prices had been established, including rather high prices on consumption goods, and relatively low prices on production goods. In consequence, almost all gross benefit of socialist enterprises at that time had been concentrated in sector II; while the enterprises of sector I hardly were able to cover their costs of production, and many of them had considerable deficits. This "two-level" system of prices has not been established for some theoretical reasons. It appeared as the result of an inflationary stress, caused by a very large industrialisation program, concentrated mainly on the heavy industry, which for a long time absorbed the increase of employment and provoked a considerable increase in the loan fund without almost any recompensation in the increase of supply of consumption goods. In such conditions the increase of prices of consumption goods had been inevitable, entailing in its turn the rise of nominal wages and the rise of production costs in all branches of industry. In consequence, the prices of production goods remaining constant, the production of production goods became narrowly profitable or even deficitary. As a rule prices of production goods have been raised only for the deficits to be covered, even in the further development of the economy of the Soviet Union, when the economic growth was balanced already and no constant inflationary stress existed.

All European socialist countries at the industrialisation stage of their development adopted the "two-level" system of prices. This system has some advantages. The calculation of prices of production goods is

extremely simple, because these prices comprise only average costs of production and average rate of profit, calculated as a percentage of costs of production and equal for all products. The calculation of prices on consumption goods is more complicated, their level have to be adjusted to the nominal wages, and their internal relations have to reflect demand-supply relations on different goods. But in this area, the observation of the market gives direct indication on the necessary corrections of prices, which have to be done. Another advantage of the "two-level" price system is the concentration of almost all gross benefits in only few branches of the industry, which facilitates the accumulation of budgetary revenues.

This system has, however, its disadvantages, too. From the theoretical point of view, it leads to splitting the monetary system into two parts, in which the monetary unit has a different average purchase power, what makes many economic figures and indicators hardly comparable. Especially in economic planning and the calculation of the economic efficiency of different projects this practice provokes great difficulties. And in the practice many difficulties arise, because some products, serving at the same time as production as well as consumption goods, have to be sold at two different prices for each purpose. The "two-level" price system was compatible only with the far centralised system of planning and management, in which almost all production goods were directly rationed, all production targets were established by central directives, and economic accounting played almost no role.

The decentralization of the system of planning and management in all socialist countries entailed reforms in pricing systems. In most of them the prices of production goods have been raised, so at present there are no large differences between rates of profit in different industrial branches. But the mere raising of the rate of profit in the prices of production goods and the more equal division of gross benefits between all industrial branches does not yet mean that a rational system of prices has been established.

In a decentralised system of planning and management, where the choice of productive targets, of techniques of production, of raw materials etc. is to be made by independent producers on the basis of calculation, the

necessity of a rational pricing system is evident, for the choice of producers to be compatible with general needs and preferences. But what a "rational" system of pricing should be like in a socialist economy, it is not easy to say. While theoretical discussions on the subject are proceeding since ten years in all socialist countries, in practice the method of "trial and error" is still adopted. It means, that every established price-either of production or of consumption good - has to prove in practice its compatibility to the market conditions. Reactions of producers and of consumers to the price's level, movements of stocks etc. are criteria for this compatibility. It must be underlined, that such a method of observing market reactions to prices and of correcting prices according to them seems to be necessary by every system of pricing, irrespective of its basic principles. Naturally, the efficiency of this method, demands a good information about market movements and a great flexibility.

In theoretical discussions, the necessity of an flexible price policy, adapting quickly prices to changing market conditions, is generally admitted. This flexible price policy adjusting prices to practical needs, has however to establish initial "basic price" for every commodity, of which subsequent deviations could be made. And the main point of all discussions on the pricing system are the principles of establishment of these theoretical "basic prices". It is also generally admitted that the price of every good has to comprise its costs of production and a rate of profit, but there is no general agreement on the principles of estimating costs of production or the rate of profit.

For the estimation of costs of production, two main methods are proposed : the average planned costs method and the so-called "marginal" costs method. (The term of marginal costs is here not used in precisely this meaning, which is generally attached to it in the economic theory). According to the first method, the basic price of every good has to comprise planned costs of production, calculated as an average of all individual planned costs of production of this good by all producers. Individual costs of production of the same good at different producers sometimes differ considerably, and the question arises, which costs to be taken into account when calculating the economic efficiency of the substitution of some materials

by others. According to the first method, only average costs of production reflect adequately "social" cost of production, and therefore the commodity produced at lower average costs ought to replace the commodity produced at higher average costs. So the prices have to be based on average costs of production, if they are to indicate the social general preferences of the substitution of commodities and of the allocation of investments.

According to the second method, the highest (called "marginal") costs of production have to be taken into account when calculating the results of the substitution. The reason for this statement is the assumption that the substitution of one unit of a certain commodity by one unit of another commodity means the reduction of the output of the first good and the increase of the output of the second one. Logically, the reduction of the output ought to take place in the factory, producing at the highest individual cost. On the other hand, the increase of the output of the substitutable good can be achieved only in factories producing it at highest individual costs, because it must be presumed that idle productive capacities are not maintained in the cheaply-producing factories. So finally the result of the substitution ought to be measured by comparing marginal (it means 'highest changing') costs of production of substituted goods, and not by their average costs of production. In consequence, prices stimulating the substitution according to social preferences have to be based on marginal, and not on average, costs of production.

It is impossible to relate here all the arguments which were (and still are) formulated in the favor of each of the proposed methods, but it seems that the method of average costs fits better to practical needs of a planned economy. In most cases the problem of substitution arises by establishment of the investment programmes. It cannot be presumed that the substitution is performed exclusively within the already existing productive capacities and that it entails the reduction of the output of the commodity being replaced. In normal conditions all productive capacities are fully engaged in production, and every increase of output requests ~~no~~ investments. And there is no reason for which the cost of production in the newly constructed enterprises ought to be equal to the marginal costs of production in existing enterprises. So, in a developing economy, the results of the substitutions ought to be measured rather by comparing the costs of production in new constructed

factories, but it is impossible to include these costs in basic prices because of their uncertainty. On the other hand, the relation between prices of substitutable goods have to influence the appropriation of the entire production of these goods, and not only of the increase of their output. So, like most economists in sociamist countries admit, the average costs of production have to be considered as a most suitable basis for pricing, although some adjustment of their level must be made for the purpose of calculating the economic efficiency of investments in different branches of industry.

It must also be underlined that the method of "marginal" costs would lead to a great increase of prices of raw materials, especially on products of mining. In consequence, in Poland's case the gross benefit in mining would exceed the amount of the entire gross benefit needed for investments and collective consumption in the whole national economy. Thence in order to equate the amount of the gross benefit with the expenditure on investments and collective consumption, prices on all industrial products except mining products ought to be establish on the deficitry level. Such system of prices could not be called a "reasonable" one, although in its principle it is based on the marginal theory.

The second problem of the construction of the basic price - not less vividly discussed than the costs of production - is the method of calculating the rate of profit, which has to be included in the basic price of each commodity. The general amount of the gross benefit, which has to be earned by the sale of all kinds of goods within the national economy during a certain period of time, is determined in principle by the amount of expenditures on investments and on collective consumption, but the general amount may be distributed among different branches of industry and among different goods by various methods.

The first question arising here is whether the rates of profit for different goods should be established on an equal level for each of them, or on differentiated levels. One of innumerable systems of the differentiated rate of profit is the already mentioned system of "two level" prices, which still has its supporters among theoretists in socialist countries. But the opinion that the rate of profit in basic prices on different goods should be

established on an equal level, is now prevailing. It is assumed that only the basic prices, comprising equal rates of profit, are fully comparable and admissible in all economic calculations, aiming to define the economic different projects, especially in investments. Of course, current prices, established by different conditions of supply and demand on the market, differing from basic prices, would comprise finally different rates of profit, but these deviations, unavoidable by every system of basic prices, have to be considered only as exceptions of the general tendency to standardise the rates of profit, included in prices.

The decision to establish equal rates of profit in basic prices on all goods does not solve all the problems involved here. Equal rates of profit may be established according to different principles. Three main methods are proposed in this domaine:

- 1) The establishment of the rate of profit proportionally to the cost of wages,
- 2) The establishment of the rate of profit proportionally to the total costs of production,
- 3) The establishment of the rate of profit proportionally to the total value of the means of production engaged in a given branch of industry (it means proportionally to its fixed and floating funds).

There is also possibility of combining these methods, and namely by adding to the costs of production the rate of interest on fixed and floating funds used in production, which could replace the part of gross benefit hitherto forming the turnover tax, and by distributing then the rest of gross benefits proportionally to the costs of production.

The relation between the estimated gross benefit and the investment expenditures was and is still used as one of indicators of the economic efficiency of investments in projecting works. In Poland, for instance, even minimum rates of the "rentability" of investments are established as directives for projecting offices; these rates indicate the minimum admissible ratio of the estimated amount of the gross benefit (by existing prices) to the costs of investments. But this practice, according to the statements of

the supporters of the method of "prices of production"¹⁾, is not sufficient to assure for the investments to be allocated in the most efficient way.

The supporters of the system of the prices of production in the rôle of basic prices pretend that the real burden of the production of different goods cannot be measured only by their current costs of production, including only the amortisation of engaged fixed funds, but ought to be measured also by investment expenditures, the rate of which on a unit of production in different industrial branches differs considerably. The differentiated level of the "capital exigency" of the production of different goods has to be reflected in their basic prices, this being the condition of the accuracy of all economic calculations and of all economic choices made on the basis of prices.

The opponents of this theory of socialist "prices of production" indicate in their statements that the category of the price of production in the socialist economy has no basis in the social and economic relations. The average rate of profit proportional to the amount of the capital was the result of the competition between the capitals engaged in different industrial branches and moving from one branch to another in search of highest rate of profit. In the socialist economy neither the competition between different industrial branches exists, nor the allocation of investments accordingly to the highest rate of profit would be necessarily advisable. So, according to the opponents of this method, the prices of production within the socialist economy would be an artificial category of a doubtful usefulness. It is also underlined that in practice the construction of prices including the rate of profit proportional to the amount of the funds engaged in the production would be very difficult, if not impossible, because

1) The category of the price of production has been introduced into the economic analysis by Carl Marx. He has stated that in a free competitive capitalist economy (so not in a monopolistic one) there was a tendency to distribute the total surplus value among all capitalistic enterprises proportionally to the amounts of the capital engaged by them. So the price of production comprises the average costs of production and the average rate of profit, determined by the relation of the total surplus value to the total sum of the industrial capital. In the free competitive capitalistic system market prices oscillate around prices of production.

one can determine the value of the means of production involved in the production of the whole industrial branch, but one cannot determine the value of those means engaged in the production of a separate commodity. So, in practice, the rate of profit included in the price of a separate good can be calculated ~~only~~ proportionally to the costs of production, or to one item of these costs.

It seems, however, that recently the opinion that the basic prices must reflect differentiated exigences in capital in the production of different goods, begins to prevail. In Poland, it is proposed to build for the period of the five years plan 1966-1970 a system of basic prices, including the rate of interest on the engaged fixed and floating funds, while the rest of the necessary gross benefit would be distributed proportionally to the total sum of the costs of production or - in some industrial branches - to the costs of wages. So this proposed system would represent one of possible combined methods of distributing the gross benefits among the industrial branches and separate industrial products.

The system of establishing the rate of profit proportionally to the costs of wages seems to be more advantageous than the system of establishing the rate of profit proportional to the total amount of costs. The enterprises and their workers, participating in the net profit, are interested in the maximisation of the relation between the profit and the loan fund, because it assures the highest amount of bonuses paid per one person. Aiming to ~~maximise~~ this relation, they can avoid the production of cheap goods, in which cheap raw materials are used, because such goods can bring less profit on the unit of loan fund than the expensive goods, in which expensive raw materials are appropriated, and the share of manpower remains the same or only slightly higher. When existing economic conditions request the rigid economisation of material means of production and the encouragement to the more precise methods of production, demanding more of manpower per unit - and this is the case of Poland, especially in the demographic conditions of the coming period - the immunisation of the amount of the profit of the costs of materials seems to be advisable.

3. The prices and the financial system of the socialist state.

The role of prices in the economic mechanism of a planned socialist economy is very complex, and it differs in different systems of planning and management. As a rule, the role of prices and all other monetary factors grows more important proportionally to the progress made in the decentralisation of the system of planning and management, when the decisions taken by the enterprises grow more and more independent from their upper organisation and are influenced only in the indirect way, by the system of different stimuli and incentives. That is why all theoretical discussions on prices in the socialist countries are strictly bound with discussions on the role of profit, bonuses etc., in the socialist economy.

But even independently of the system of planning and management, of the system of transmitting centrally planned targets to the enterprises executing them, prices have to be applied in planning as the only means of aggregating physical units. It is not meaningless, what kind of prices are used for this purpose. Internal relations between prices, wrongly reflecting social costs of production of different goods, lead to the wrong calculation of the economic efficiency of the allocation of disposable means of production and in this way damage the balance of the growth of the whole national economy. It is generally admitted that for this purpose ought to be applied only the prices reflecting as perfectly as possible the economical effectiveness of the allocation of all productive factors in different branches of the material production, and the perspective long term social preferences. This role may be accomplished by the "basic prices", and this aspect of the role of prices is mainly (if not exclusively) considered, when different methods of constructing basic prices are discussed.

The prices, however, have not to serve only to prospective planning on different levels of the economic ladder in a centralised, decentralised or combined manner; at the same time they have to assure the current - not prospective - equilibrium between the demand and the supply of different commodities and services on the market. It may happen, and it happens very often in practice, that the internal relations between prices compatible with the aims of long term planning, are at the same time incompatible with

the conditions of the current market equilibrium, and inversely. Furthermore, the relations between prices aiming to shape the independent producers' decisions according to the social preferences, must not necessarily be the same relations which are needed in order to shape the decisions taken by the individual consumers or by investors. Finally, three different - though of course related to each other - systems of prices may exist at the same time: basic prices for planning calculations, current prices for producers of goods, current prices for buyers of goods. It may seem to be complicated, but in practice such a triple system of prices can be operated successfully, with the instruments provided by the financial system.

The most effective instrument of differentiating relations between prices for producers and for buyers is the turnover tax, with specified and different rates on the unit of every good. The turnover tax allows to differentiate the rates of the rentability of production within limits determined by the difference between the wholesale price and the costs of production of each good. In case, when this difference for some reason has a negative value, the turnover tax may be replaced by the budgetary subsidies, paid in differentiated rate on the unit of the so-called "deficit" good.

In this way, the financial system with its proper instruments is able to immunise the system of prices for producers and the system of prices for buyers of any direct influence of the system of basic prices. It explains, why the "two level" system of prices could be applied during many years causing no special difficulties, except in economic calculations. It is not of course the reason for the irrational system of basic prices to be preserved, especially when taking into account the fact that every system of basic prices can be easily adapted by the financial system to the practical conditions. The change of the system of basic prices does not entail necessarily the change of retail prices of consumption goods. The increase of prices of production goods sold within the socialist sector means only that the turnover tax has to be imposed on production goods, while its rates in the prices on consumption goods have to be reduced at the same time.