

A NOTE ON PRICING MECHANISM IN THE INDUSTRIALIZATION OF THE U.S.S.R.

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When we consider the price policy of the Soviet Union, which was enforced to facilitate the creation and establishment of heavy industries, in relation to the price mechanism as it actually functions in the economic process, it may be said that its function should be found within, and not without, the price mechanism. This not only indicates the transitional character of the Soviet price policy but presents suggestions for a genuine socialist price mechanism.

I

It is the aim of this paper to make an inquiry into the price policy of the Soviet Union in its process of industrialization and also into the actual function of the planned prices fixed by such policy. As might be expected, the author makes a distinction between price policy and the prices fixed thereby; and prices as actually functioning. No doubt such a distinction presupposes a price mechanism in action in Soviet economy. However, if a plan does not work as originally intended it may not mean merely that there is at work a mechanism differing from the principles of a planned economy. We should not overlook the fact also that the principle has divorced itself from the mechanism which, we may well say from the theoretical point of view, should be embodied in the principles of the planned economy, and that this divorce has reduced the strength of the plan. In this sense, prices as they have actually functioned in the Soviet economy in the process of industrialization can be said to embody a problem which must be considered in the historical perspective of establishing the socialist principles of a national economy.

The multiplicity of *uklad* (structure) in the Soviet economy, characteristic of the so-called transitional period, makes it unavoidable to have prices serve as links between the different *uklad*. It is assumed that in this period the character of a socialist economy's conformity to the central planning does not as yet cover the whole national economy. The planned sector of the economy must necessarily look to the private sector for the supply of foodstuffs for the urban inhabitants and of agricultural products for industrial raw materials. Private capital can possibly exist in the channels of such supplies; and even industrial production itself has to depend to a certain extent on the private

sector. In addition, goods produced in the private sector may, in some cases, go to the final consumers through channels within the private sector, without passing through the planned sector. The relationship between the planned and socialized sector and the private one could, in some cases and at some periods, be non-economic, as was observed at the time of requisition for provisions in the days of the War Communism (May 1918–March 1921). However, it is clear that such a relationship can basically exist only as an economic one, because it should be impossible for a state power to maintain for long a relationship which is not viable from an economic point of view. And it is only through the medium of prices that economic relations are able to come into existence. Those various economic categories which do not only represent mutual economic relations between sectors (for example, such as the quantities and kinds of products needed by each sector of the economy, or social evaluation of the products and productivity of each sector which are necessary for acquiring products needed from other sectors) but also reflect the competitions and struggles within such relations, can never fail to find their integral manifestation in the prices of products. Thus input-output factors will come to flow through the medium of prices, which are a concentrated expression of various economic indicators; this in turn will result in further economic activity. If we may call price function as thus defined to be price mechanism¹ we may say that the relation between the two sectors of the economy is ruled by the price mechanism.²

However, this price function in the U.S.S.R. was not merely active between the two sectors. For if it were active between the two sectors all the measures taken within the planned sector should be in consonance with the function of the price mechanism if this sector were to win an economic victory over the other sector. As a matter of fact, those measures taken to cope with the soaring prices on the private markets were in line with the price mechanism. Moreover, if the planned sector was to be able to cope with the private sector on the markets, it should not be permissible for the planned sector itself, or its planned character, to run counter to these principles of price.

The price function has kept working in the Soviet Union within its planned economy, not only in the transitional periods but even after planning came to dominate the whole economy of the country. As is well known, this fact has long been ignored deliberately in Soviet economic thinking, but the

¹ Economists, as is generally accepted, often attach further implications to the term "price mechanism." In other words, this term is often applied only to what is connected with private, individual decisions of individual economic subjects (enterprises) and, therefore, is opposite from a centralized economy. In this paper, however, the term is not meant to carry any more meaning than defined here.

² The question of whether one should consider the rule of a law commonly covering the two sectors and, if one should, what such a law is, constituted one of the points of controversy between E. Preobrazhensky and N. I. Bukharin. In present-day Soviet literature it is considered to be the rule of a law of value, which is understood to be the result of the struggle between a planned utilization of the law of value in the state sector and an anarchic manifestation of such a law in the private sector.

fact is that it has kept working, and Soviet price policy has proved effective only when it happened to be in line with the inherent function of prices. The function of prices will now be examined concretely in relation to the evolution of the industrialization policy.

II

As is well known, what started the Soviet economy on the road to planned industrialization was the 14th congress of the Communist Party of the Soviet Union held in December 1925. The congress decided on the course of industrialization as the general line for achieving the upbuilding of socialism, and from 1927 the Soviet economy began to dash forward toward "socialist industrialization." It is of much significance that this policy was proposed after the Soviet economy had passed through the New Economic Policy (NEP). The NEP pulled the Soviet regime from the brink of collapse, although this did not mean that a socialist economic system in its true form had come to stay in Russia. Yet, needless to say, the NEP did not mean total defeat of the principles of a planned economy advocated by the young revolutionary regime, which was struggling amid catastrophic economic conditions against the principle of capitalism. Indeed, at a time of fiery controversies over the issue of advisability of adopting such a policy the NEP may have appeared to be "a flagrant denial of the notions and beliefs about the nature of the 'true' socialism."⁸ But it still represented an attempt to bring into being, by introducing a measure of the very capitalistic principles, an arena where the principle of socialism *could* fight the principles of capitalism. That is why through the whole era of the NEP the principle of planned economy continued struggling with the principle of capitalistic market (the reader may recall, for example, the fact the Goelro Plan was put into force and the Gosplan was formulated during the NEP period). The fact that the economic rehabilitation of Russia was achieved through the strange mixture of and tension between the planned economy principle and the private market principle under the NEP meant that the time had come when the socialist formula of economic management had to be brought to trial with respect to its viability as a commanding principle of the national economy. It became both possible and unavoidable for the Soviet regime to tackle the question of how far the principle of planned economy could enable the national economy to exceed the pre-war level and how it could attain economic results worthy of socialism. Unless the socialist regime took up this question and succeeded in formulating a solution, its *raison d'être* would be lost forever. And with it, the very existence of the socialist regime afloat like a solitary island on the ocean of capitalism would be worn out by domestic capitalistic elements and would finally be swallowed by the angry waves of world capitalism.

Speaking on the industrial level, as a result of the NEP the industrial

⁸ Alexander Erlich, *The Soviet Industrialization Debate, 1924-1928*, Cambridge, Massachusetts, Harvard University Press, 1960, p. xvi.

production of the Soviet Union in the 1925-26 period nearly recovered its pre-war (1913) level. This process had been carried out by using up existing facilities rather than by introducing and utilizing new machines and equipment. As a result, the process of rehabilitation in its final stage became slow in tempo. Unless there was an influx of new equipment the slow-down of rehabilitation could not be reversed. The commanding heights of the economy now being in the hands of the state, a vigorous push in new equipment investment had to be undertaken by the state if the task were not to be abandoned in favor of capitalism. Thus the year 1926 was a turning point at which the Soviet economy, having passed through the stage of rehabilitation, was being rebuilt on the new foundation of industry.

The term "socialist industrialization" is generally accepted today as having a certain specific meaning.⁴ Its essential features are to free the means of production from private ownership as the first step of preparing for the accumulation of capital and laying the foundation on which the principles of a planned economy can operate. Second, in line with the law of preferential development of "Department I" as a strategic guiding principle, to concentrate an extremely high ratio of investment on that department and, accordingly, on the section producing such means of production as are used in manufacturing the means of production (i. e., heavy industry section).⁵ It, therefore, means to execute economic development almost exclusively on the basis of capital accumulation within domestic industries.

Such a socialist industrialization would be directly conditioned by, and would perceive its immediate task to be, the accumulation of funds and the dissemination of new techniques and equipment to various economic sectors. Since the state was in possession of the decision-making power for its industrial enterprises, it was natural that it should have tried to fix prices of products in accord with the aforesaid condition and task. And it was central to the state's price policy to fix prices for, say, producer's goods which were

⁴ This is not to say that there is consensus on all points. For example, E. Iu. Lokshin's (Э. Ю. Локшин) statement appearing in *Экономическая энциклопедия: промышленность и строительство* (*Economic Encyclopaedia: Industry and Construction*), Vol. 3, Moscow, Publishing House (Soviet Encyclopaedia), 1965, is not consistent either in distinguishing between or in generalizing the Soviet Union's historical experience as a country which began from a backward state of industrial development, and the presumable features of the process of development if the country had begun from an advanced state of industrial development. Hence there is some confusion over the general definition of the concept of socialist industrialization. Here one of the core problems may be said to be how to understand the "preferential development of the Department I." As for this law of development, see the author's article, "An Essay on Economic Growth and Structure Relations between Department I and II," *The Journal of Economic Studies*, University of Tokyo, No. 4, February 1965, pp. 1-20.

⁵ For a formulation of this, see M. Dobb, *An Essay on Economic Growth and Planning*, London, Routledge & Kegan Paul, 1960, Chapter V. However, Dobb's formulation leaves some room for dispute. For this point see author's article (pp. 19-20) as mentioned earlier.

products of heavy industry, on entirely different principles than goods for personal consumption. In order to consider what is meant by this differentiated price formation, it may be useful to examine it in relation to, or in comparison with, the state of other prices.

Throughout the period of growth of socialist industrialization, prices in the Soviet Union were characterized by a dual structure. Prices at the time differed widely; they differed according to (a) difference in classification of commodities (i. e., whether they were industrial or agricultural products; and if they were the latter whether they were grains, livestock industry products or industrial crops); (b) different phases of realization of value (i. e., whether a price was wholesale, retail or procurement); and (c) difference in the character of commerce (i. e., whether it was a socialized commerce or a private one; and if it was the former, whether it was state-operated or cooperative). And these different price levels were formed in effect on the basis of different principles of price formation.

The term "dual price" system as it is generally used refers to the system which was started in the textile industry in 1928 and then put into effect in such industries as metal and timber in 1929. It was continued until 1935 and, after a period of discontinuation, was reintroduced in 1939. This system intended to distinguish between the price table used in transactions of a syndicate with industrial enterprises and the price table used at the time when syndicate sold products to commercial organizations. Suppose, however, with the operation of a universal price principle, a whole set of price relations between various groups of commodities would fluctuate correlatively, as in the case where economic decisions are made by individual links of economy in accordance with the market principle. And if there were different principles of price formation according to different groups of commodities, there might arise a situation where relation between prices lost much of their previous correlativeness. If we may call such a situation a dual price structure, then the relationships between various prices in the historical period under review may be referred to as such. Thus, the price structure as a whole presents itself as a complicated mosaic.

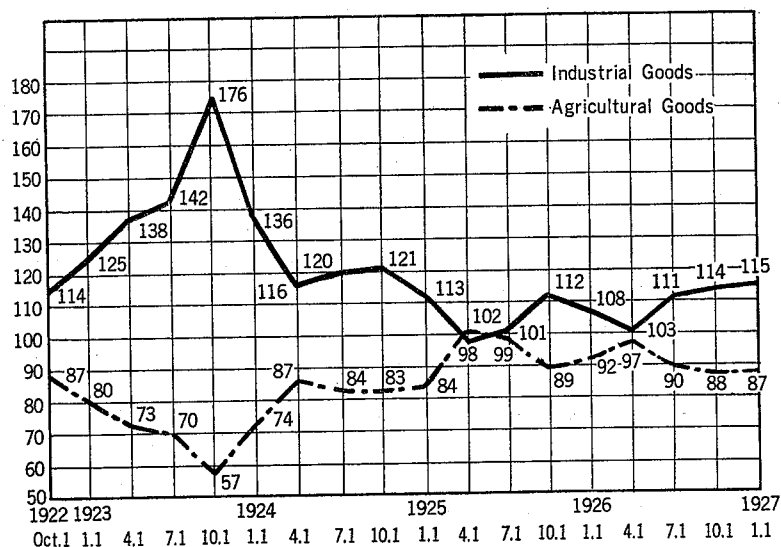
This mosaic of price structure may be said to have resulted from two different origins: one interpreted as having been planned from the beginning; the other, having originally been intended as a single price structure but in the course of time turning into a dual structure due to the coexistence of state and private sectors.

The latter case is based upon the instance in which a price set by the planning agency could not function as intended, and was in force only in a certain limited area, or with respect to a limited volume of goods on the strength of the administrative power of the regime; therefore, outside that area or above and beyond that volume of goods, prices would endogenously prevail at different levels and on a different principle (private market principle). Such dual prices as endogenously formed also represent terms of the input-output relationship between planned and non-planned sectors. That is,

a transfer and redistribution of net incomes takes place between the two sectors through the social evaluation of products and, therefore, the evaluation of social costs and social quantities of labor which are expressed in the form of price. Such an endogenous transfer of incomes is sometimes found outside the context of the principle of the planned economy, and there are often cases where that phenomenon as such is found useful for the planned sector. How the principle of planned economy could tackle such a situation would be a major problem from both theoretical and practical points of view.

Another phenomenon which may be included in this situation is the relation between the prices of industrial goods and those of agricultural products, or what is called *Schere* (ножницы; literally, "scissors"). *Schere* can be observed in the following graph.⁶

Figure 1. Ratios of Price Indices of Industrial Goods and Agricultural Products to Aggregate Index of Gosplan Commodity Prices (ratio in 1913=100)



This price gap between industrial and agricultural products was of course a result of the relative rise in the prices of industrial goods, which was a natural sequel to such abnormal supply-demand relations of the time as, for example, when the Центросоюза (Central Union of Consumers' Society of U.S.S.R.) had to exchange industrial goods worth 15.5 million gold roubles for farm products worth 67.10 million gold roubles. Such a price gap was also connected, as Malafeev points out,⁷ with certain factors in the production process, such as the fact that while the cost of agricultural products was lowered, even if

⁶ A. Н. Малафеев (A. N. Malafeev), *История ценообразования в СССР/1917-1963/ (History of Price Formation in the USSR, 1917-1963)*, Moscow, Publishing House (Thought) p. 35. (This work was translated into Japanese by the author of this article in May 1968.)

⁷ A. N. Malafeev, *op. cit.*, p. 45.

slightly, due to the abolition of absolute rent, the value of industrial goods kept rising. Of course, these changes in the cost factors in the production of industrial goods may not be adequately explained without reference to market conditions, but the author will not dwell upon that point here. In the context of the present discussion it should be pointed out that such an exchange of inequivalents as between industry and agriculture operated so as to absorb the results of surplus (unpaid) labor in agriculture through prices in order to support the state industrial sector. And hence, as can be seen in Preobrazhensky's discussion of "the law of primitive socialist accumulation,"⁸ the theory that the process in which net agricultural income is made to serve as a major source of capital accumulation in industry can and should be managed intentionally and systematically.

However, the fact that the theory of Preobrazhensky was after all denounced can also be said to have had an objective foundation. For the price gap between agricultural and industrial products would obviously have weakened the political strength of the labor-farmer union (смычка), and the alienation of the farming populace would most probably have created a fatal stumbling block for the revolutionary regime. Even before things reached that extreme, impoverishment in the agricultural sector had jeopardized industrial production itself, as the "sales crisis" in 1923 indicated. The Central Committee of the Communist Party of Soviet Union had this clearly in mind when, in its plenary session in February 1927, it decided on a 10% lowering of both wholesale and retail prices of industrial goods. A critical situation had appeared in grain procurement: grain procurement in the latter half of that year was only 300 million pood or decrease of 128 million pood from the level of the corresponding period of the previous year. Of course, the enormity of the price gap between agricultural products and industrial one was partly responsible for the situation.⁹

So various measures were taken on the part of the plan principle to overcome the price *Schere* between industrial and agricultural products. Notwithstanding this, however, it must be pointed out that socialist industry was able to profit, if unintentionally, by the very existence of this *Schere* as long as it actually persisted. Did this circumstance not cast its shadow on the price policy? It seems to the author that the authorized theory is under an obligation to explain within its own theoretical framework how the planned sector could allow itself to gain such an unintended profit. But the price discussions in the past ten years cannot be said to have done this; it must rather be noted that no attention has ever been paid to this question. Therefore, it may be said that, in the realm of theory at least, if not in actuality, the theory of Preobrazhensky is still alive.

The case is different, however, with the gaps between wholesale and retail prices in the transitional period (such a period-limitation is necessary).

⁸ E. Preobrazhensky, *The New Economics*, translated by Brian Pearce, with an introduction by A. Nove, London, Oxford University Press, 1965, reprinted in 1966.

⁹ For causes of this crisis, see A. N. Malafeev, *op. cit.*, pp. 116-117.

Before private commerce was driven out and, even after it was, while the behavior of consumer co-operatives continued to defy the principles of the plan, retail prices had been pushed up to an extremely high level by non-plan elements. State revenues, to be sure, may have gained from this high level of retail prices, but at the same time private capital could draw unreasonable profits from it. The price gaps, therefore, could not be allowed to continue in this case.

In this connection, it may be necessary to point out that private producers and plan organs should naturally have responded in different fashions to the price situation even if they both were to behave on the basis of price principles. Let us examine, for example, the rise in grain procurement prices during the 1927-29 period. The price rise can be attributed to the pattern of behavior of private producers that would be reflected in a usual price mechanism or, in other words, to the pattern of behavior in which private producers, in seeking for social evaluation of their labor favorable to them through prices, would control the volume of supply in accordance with demand. The following will show the relations between the cost and the planned procurement price per centner of the average grain (an average of four major crops—rye, wheat, barley and oats) in the Soviet Union.¹⁰

Table 1. (rouble)

Year	Cost Price	Planned Procurement Price
1925-26	4.96	6.30
1926-27	5.25	5.30
1927-28	5.68	5.70
1928-29	5.29	6.54

For 1926-27 and 1927-28 the cost prices and the planned procurement prices were close, but between 1927-28 and 1928-29 the cost price was lowered while the planned procurement price was raised, so that the movement in opposite directions would have brought of itself a greater profit margin. In 1928-29 however, the actual procurement price turned out to be still higher—at a level 66.7% higher than the cost price. This was because farmers were able to raise the prices of their farm products in response to a strong demand for them and, besides, private procurement agents who operated as middlemen offered prices higher than those of planned procurement. Thus, since both producers and marketing agencies behaved in accordance with private economic principles, the procurement prices were bound to go up, reflecting the actual supply-demand relations or the social estimation of labor in the agricultural sector which they represented. However, while the private producers were free to act as they did, the planning agencies were not. The latter had to take systematic measures for holding the price rise in check, for a probable trend of prices (soaring procurement prices → rising retail prices of farm products → rise of wages → rise in the prices of industrial goods)

¹⁰ A. N. Malafeev, *op. cit.*, p. 122.

had to be prevented. For, while private market principles behave on the basis of shortsightedness or the lack of what Pigou called "telescopic power," a planning agency must act on the basis of capability of forecasting the possible developments of things—an ability which is of vital importance.

Among the cases where a dual-structure price system was adopted as a requirement of the plan theory itself, there were the aforementioned system of "dual price-table," and price differentiation among commodities of different supply "funds" under the ration-coupon system (карточная система).¹¹ At the time of its introduction, the dual-structure price system functioned so as to break the bottleneck in the supply of foodstuffs and living necessities to urban and rural people. And after the system had achieved some of its aims, it underwent gradual change as it came into conflict with changes in the economic process.

While these price gaps were gradually changed into a uniform price on the basis of a unitary principle of price fixing, the dual-price system continued to function throughout the earlier part of the 1960's based on the different criteria of fixing prices for personal consumption goods and for producer goods. The dual criteria for price fixing constituted, as was stated before, a main prop for advancing socialist industrialization through price mechanism. It must be noted, however, that this scheme of price-fixing was not merely adopted to serve the earlier stages of the socialist industrialization, but persisted until very recently. Some consideration will be given in the following chapter to the function and implications of this scheme.

III

The fact that different criteria were used in fixing the prices of products for Department I (the department producing the means of production) and for Department II (the department producing consumer goods) may be summarized to serve our present purpose as follows: the prices of the former were fixed at a level lower than its actual value and the value of its surplus products was realized through the prices of Department II in the form of a turn-over tax.¹² In other words, the value of surplus products produced in

¹¹ In the case of industrial goods, since 1931 government has introduced such prices as розничные цены нормального фонда города (retail prices for commodities of regulated commodity-funds for cities), цены коммерческого фонда (retail prices for commodities of commercial funds) (these, too, comprised medium and higher prices), цены нормального фонда села (prices for commodities of regulated commodity-funds for villages), цены образцовых универмагов (model *univermag* prices), цены Торгсина (*Torgsin* prices), etc.

¹² Of course, what the turn-over tax represents is not merely the portion of the surplus products of Department I prices which remains unrealized through Department I prices. It also represents the portion of surplus products of Department II which does not take the form of profit. For a study of the process of the social flow of net income as connected with the turn-over tax, see Я. Г. Либерман, *Государственный бюджет и социалистическое воспроизводство*, (Ja. G. Liberman, *State Budget and Socialist Reproduction*), Moscow, Publishing House (Finance), 1966, pp. 113-139.

Department I was realized not through the prices of products of Department I, but through those of Department II.

The author qualified the above summarization with the phrase "to serve our present purpose" because he anticipated the following question: how can one intentionally deviate price from value when there is no scientifically accepted method of determining the quantity of value of a product? This question may be answered as follows: Since there is no precise way of quantifying value, it is impossible to determine quantitatively to what extent the price level is lower than the level of value (or more exactly, the level of price corresponding to it). But this fact itself gives rise to a situation where fixed price is divorced from value. Also a price which is roughly equivalent to the cost, or a price equivalent to the cost plus minimum profit (about 3 to 5%), may not be considered to correspond to the value. A price merely corresponding to the cost does not represent the value of surplus product; and, considering that the organic composition of capital is higher in Department I than in Department II, a price equivalent to cost plus minimum profit cannot be considered to correspond to value since the minimum-profit portion of the price was far from covering the required entrepreneurial "funds" and investment funds in enterprises of Department I.

The author is not as yet certain as to when and how this method was brought into existence. S. G. Strumilin, for example, refers to following effect in the 1925-26 period, the eve of the unfolding of socialist industrialization. Market prices of products of industrial enterprises under the Supreme Council of National Economy (BCHX) were, in the case of all heavy industrial products excepting oil, 20.9% lower than their values. To cite individual ratios, the prices of coal, processed metals, electric machines and appliances, timber and chemicals were lower respectively by 31.1%, 28.3%, 16.0%, 10.6% and 4.2% than their values. On the other hand, the prices of light industrial products were higher than their values by 17.2% in total and, individually, by 256.0% in the case of foodstuffs, 72.3% for sugar, 5.6% for paper, with the only exception being the prices of textiles which were 9.5% lower than their value.¹³ Also Malafeev, computing the surplus product realization coefficient (ratio of surplus products realized to those produced), states that in 1925-26 the ratio was 0.35 in heavy industry and 1.86 in light industry and that the difference between the two widened in the years which followed.¹⁴

On the other hand, Iu. V. Iakovets holds, with regard to prices of products in the 1925-28 period, that retail prices of agricultural and industrial products, transfer prices of industrial (both producer and consumer) goods, and producer's prices of agricultural products were all more or less stable in their indices and that, besides, their stable prices of all kinds in this period stood high enough to cover production costs and to ensure the profit required for reproduction on an expanding scale.¹⁵ He gives the ratios of accumulated

¹³ С. Г. Струмилин (S. G. Strumilin), *На плановом фронте (On the Plan Front)*, Moscow, 1958, pp. 541, 548-549.

¹⁴ A. N. Malafeev, *op. cit.*, pp. 353-354.

Table 2. The Ratios of Accumulated Elements to the Transfer Prices of State-Industry Products (%)

		1924-25	1925-26	1926-27
Ratio of Profit to Transfer Price	All Industry	10.5	9.7	10.9
	Group A	9.5	7.1	9.2
	Group B	11.0	11.0	12.0
Ratio of Consumption Tax Other Taxes and Collections to Transfer Price	All Industry	17.4	18.8	20.4
	Group A	4.0	4.5	4.0
	Group B	25.5	27.7	30.4
Ratio of Accumulation Elements to Transfer Price	All Industry	37.1	35.6	35.8
	Group A	22.1	21.5	17.9
	Group B	46.0	44.4	46.9

Source: Control figures of 1928-29. *Контрольные цифры народного хозяйства СССР на 1928-1929 год*, Москва, Издательство «Плановое хозяйство», 1929, стр. 286.

elements to the transfer prices of products of state-owned industries as shown in the Table 2.¹⁶

As is indicated by the table, the accumulation elements realized in the prices of heavy-industrial products (group A) are smaller than those in the prices of consumer goods (group B). Iakovets attributes this to the fact that the organic composition of capital in heavy industry is higher than in light industry and that some sections of heavy industry, having been newly established, required higher development costs than others; he further sees the difference as reconcilable. He computed the ratio of surplus to production (profit rate) as being between 9.5% (1925-26) and 12.2% (1924-25) in group A, and between 19.9% (1925-26) and 22.7% (1926-27) in group B and states that the level of profit rate, between 9% and 12% in group A is normal. He points out that profits were gained not only by group A as a whole but by mining industry also and that it was only in the 1930's that the situation changed radically.¹⁷

It is perhaps incorrect to treat these two different views as irrevocably opposed. It must be said that both Strumilin and Malafeev merely stated what they thought to be a fact and, as will be seen later from the author's reference to Malafeev, they did not make any assertion that the situation had been intentionally brought into being by planning authorities at that particular time. Be that as it may, the author will reserve judgment as to which of the two differing views is right. However, aside from the question

¹⁵ Ю.В. Яковец (Yu. V. Iakovets), *Методология ценообразования в горно-добывающей промышленности (Methodology of Price Formation in Mining Industry)*, Moscow, Publishing House (Economics), 1964, p. 23.

¹⁶ *Ibid.*, p. 124.

¹⁷ Yu. V. Iakovets, *op. cit.*, p. 125.

of exactly when such a price system became actually established, it can be said that it found its place clearly within the total price system of the Soviet Union between 1931 and 1932.

Decisions by the Soviet of People's Commissariats (CHK) in October 1931, and by a Price Committee attached to the Council of Labor and Defense (CTO) in February of the following year gave a clear definition of the "transfer price" (отпускная цена) which had been in use without definition, and systematized prices including "calculated price" (расчетная цена) and retail price. The price system thus decided upon may be shown as Figure 2.¹⁸

Explanation of the figures will not be made here out of consideration for space. Suffice it to say that with the establishment of such a price scheme, means of production were now to be supplied to the departments and enterprises which were their users, at a price not including the turn-over tax, while consumer goods were to be supplied to consumers at a price including such tax. The prices of production means, to be sure, included such profit as was intended by the planning authorities, except for some departments which were not planned to be profit-making; but the profit was a minimal one, and was confined solely to the volume necessary for the use of the "entrepreneurial fund" (originally the "director's fund"). The planned existence of unprofitable departments and the restriction of profits available in the hands of enterprises made the prices of the means of production lower than their values; the portion thus unrealizable through their prices was to be realized through prices of Department II products.

One of the problems concerning the character of this price set-up may be as follows. When the portion of the value of a surplus product which is not realized through the price of Department I is to be realized through the price of Department II, does this mean that the latter price will have automatically been raised to a level higher than its value?

A major point of this problem is whether one should recognize the applicability of the so-called "Thesis that Total Value equals Total Price" (or more precisely, that total value is proportionate to total price) to a socialist economy. If one does recognize this, and if one is given the case in which the Department I price is fixed at a level lower than its corresponding value (or, more often than not, lower than its cost), it should follow that the Department II price would have to be raised to a level higher than that which is determined by its corresponding value level in order to fill the price-value gap in Department I, so that the unrealized portion of value in Department I might thus be realized. And this is what is held by Ia. Kronrod, A. Tikhonov and others.¹⁹ Contrary to this view, L. M. Kantor, P. Pavlov and others hold that, whether a price of the producer goods may be fixed at a level lower

¹⁸ The figures were derived from A. N. Malafeev, *op. cit.*, pp. 151, 213.

¹⁹ See, for example, Я. А. Кронрод (Ia. A. Kronrod), *Деньги в социалистическом обществе (Money in Socialist Society)*, Moscow, Gospolitizdat, 1959, p. 236; И. А. Тихонов (I. A. Tikhonov), *Основная экономическая задача СССР (Fundamental Economic Task of USSR)*, Leningrad, Gospolitizdat, 1959, pp. 317-318.

Figure 2.

Cost (себестоимость)	Profit (прибыль)	Turn-over Tax (налог с оборота)	Budgetary Mark-up (бюджетная наценка)	Commercial Extra-Charge (торговая наценка)	Special Charge on Retail Price (специальная наценка на розничную цену)
Calculated Price (расчетная цена) (later Entrepreneurial Price)					
Transfer Price (отпускная цена) (later Industrial Price)					
Transfer Price with Budget Mark-up (отпускная цена с бюджетной наценкой)					
Retail Price for Commodities of Regulated "Funds" (розничная цена на товары нормального фонда)					
Retail Price for Commodities of Commercial "Funds" (розничная цена на товары коммерческого фонда)					

As for the period from 1939:

Cost	Profit	Turn-over Tax	Commercial Extra Charge (торговая наценка)
Entrepreneurial Transfer Price (отпускная цена предприятия)			
Wholesale-Transfer Price (Price-Table Price) (оптова-отпускная цена (прейскурантная))			
Retail Price			

As for the period from 1939, when a revision took place, to 1949:

Cost	Profit	Additional Turn-over Tax		Turn-over Tax (net)
Transfer Price (Price-Table Price)		on Marketing Organization	on Commercial Organization	
		Total Turn-over Tax		
Retail Price (Price-Table Price)				

than or equivalent to its value, the such deviation of prices should not cause a change in the level of the price of consumer goods.²⁰ The main point of their argument is that, since the fixing of the price of the producer goods at such a low level enables the production cost in the consumer goods producing sector to be substantially reduced, the low-level price of the Department I product will not result in raising the Department II price to a level higher than its value. As regards this view of Kantor and others, one may well point out the following: since, among Department I products, the unrealized portion of the value of means of production for manufacturing producer goods does not immediately enter into the cost of Department II products, its realization should necessarily require the raising of the price level of the latter products above their value level, even if its spread effect is taken into account.

It must be noted, however, that this problem is associated with a more fundamental question. For the view of Kantor and others is after all a contention that a part of the value of surplus product in Department I need not be realized at any price. This view maintains that "since a socialist state is simultaneously a seller and a buyer of means of production, it would lose nothing if it realized means of production at a price lower than their value."²¹ This argument, as may easily be seen, is related to the well-known question as to whether or not the produce of state-owned enterprises under socialism is a commodity. And the contention paves way for the argument that in socialism prices for goods are not needed at all.

With respect to such an argument, the following comment may be in order. If there existed some surplus products in the form of goods usable for expanded investment, it would not be impossible to decide, for example, on the basis of the physical balance and not according to prices, how many machines should be allocated to what place (just as the national economic balance was formed in physical terms). If we recognize it possible to allocate economic resources only in physical terms (whether it is on the ground that both Department I and Department II products are produced within the same state sector, or whether it is ascribed to other factors), it might seem that we are justified in advocating the surplus-labor portion need not be realized through prices because it is enough to show the fact that the surplus-labor actually exists in the real form of goods. However, the problem of price does arise with the question of what is the criterion in allocating goods—a question which concerns efficacy in the use of social labor. Even if surplus labor may only be realized through surplus products, various inputs, and

²⁰ See, for example, Л. М. Кантор (L. M. Kantor), *Себестоимость в социалистической промышленности* (*Cost Price in Socialist Industry*), Moscow, Gospolitizdat, 1959, p. 236; *Ценообразование в СССР* (*Price Formation in USSR*), Moscow, <Economics>, 1964, pp. 13–15; П. Павлов (P. Pavlov), *Снашивание и амортизация основных фондов* (*Wearing out and Amortization of Fixed Capital*), Moscow, Gosfinizdat, 1957, p. 82.

²¹ Л. М. Кантор (L. M. Kantor), *Ценообразование в СССР* (*Price Formation in USSR*), Moscow, <Economics>, 1964, p. 14.

also those outputs which are related to the relevant inputs, have to be expressed in uniform terms, if the quantity of the surplus products is to be determined. Next, the ratio of their realization should vary with the department and the enterprise, and this variety arises not merely as a result of difference in conditions of production and productivity. Since payments to workers are made in the form of money and they buy consumer goods according to their prices, the price-expressed value of necessary labor volume is bound to change with the changing price levels of consumer goods, and so is the ratio of surplus produce. If so, the rate of accumulation cannot be determined without price expression.

If we thus recognize that all products of the national economy are to be expressed in terms of prices at the time of their exchange, what would become of the relation between total value and total price? Kronrod holds that, even when the price of a means of productions stands below its value, the "total value=total price" thesis can apply, and he explains it by a reproduction scheme.²² On the other hand, F.F. Diderikhs maintains that Kronrod's scheme merely points to the possibility of the two becoming equal to each other and that the two can often be unequal to each other, and also presents his own scheme. It seems to the author that Diderikhs is more convincing than Kronrod.²³ The author will give a simple explanation of the problem in his own way.

Let us assume that gross social production takes place with the following value structure (the symbols are used here in accordance with those in the Marxian reproduction scheme.)

$$\left. \begin{array}{l} \text{I. } C_1 + V_1 + M_1 = W_1 \\ \text{II. } C_2 + V_2 + M_2 = W_2 \end{array} \right\} \quad (1)$$

Evaluating the above in terms of prices, let us assume that the producer goods and consumer goods deviate from their values respectively to the extent of α and β , and that the price evaluation of surplus products also changes accordingly to the extent of λ (with α , β and λ being ratios). Of course, the surplus products in physical term are found in the form of either producer goods or consumer goods which deviate from their values respectively at α and β . However, because the price evaluation of both the shifted value portion of constant capital and the necessary labor portion changes from its value levels, the share of the surplus product in the total price composition will also change. So the difference between the above share and the corresponding share in value is indicated by the symbol λ .

²² Ia. A. Kronrod, *op. cit.*, pp. 394-395.

²³ Ф. Ф. Дидерихс (F. F. Diderikhs), "К вопросу о влиянии изменения уровня цен на размеры социалистических накоплений," ("On the Question of the Influence of Changes in the Price Level on the Rate of Socialist Accumulation"), *Проблемы применения математики в социалистической экономике (Problems of Application of Mathematics in Socialist Economy)*, Collection I, University of Leningrad Press, 1963, p. 75. However, his conclusion in this article, that the rate of accumulation in a socialist society is independent of prices (pp. 83-85), is not correct either in logic or as a conclusion.

So the above (1) may be expressed in terms of price as follows:

$$\left. \begin{array}{l} \text{I. } \alpha C_1 + \beta V_1 + \lambda_1 M_1 = \alpha W_1 \\ \text{II. } \alpha C_2 + \beta V_2 + \lambda_2 M_2 = \beta W_2 \end{array} \right\} \quad (2)$$

If we may affix c and v respectively to those of the surplus products intended for the expansion of the means of production and those of the same intended for replenishment of consumer goods, the above (2) will become:

$$\left. \begin{array}{l} \text{I. } \alpha C_1 + \beta V_1 + \lambda_1 M_1 c + \lambda_1 M_1 v = \alpha W_1 \\ \text{II. } \alpha C_2 + \beta V_2 + \lambda_2 M_2 c + \lambda_2 M_2 v = \beta W_2 \end{array} \right\} \quad (3)$$

If reproduction is to proceed smoothly also in terms of prices, the following relationship would be required to exist:

$$\beta V_1 + \lambda_1 M_1 v - \alpha C_2 + \lambda_2 M_2 c$$

Provided $\frac{M_1 c}{M_2} = f_1$ the above may be reexpressed as follows:

$$\beta V_1 + \lambda_1 (1 - f_1) M_1 - (\alpha C_2 + \lambda_2 f_2 M_2) = 0 \quad (4)$$

On the other hand, if the "total price = total value" thesis applies, we can derive from (1) and (2) that: $W_1 + W_2 = \alpha W_1 + \beta W_2$ (providing that we can compare value quantities with prices by finding an appropriate term), and therefore, $(1 - \alpha)W_1 = (1 - \beta)W_2$ (5)

Therefore, it should be clear that as long as the prices of consumer goods are constant ($\beta = 1$) the prices of producer goods cannot be lowered. At the same time, it is also clear that lowering of the prices of producer goods (α in $0 < \alpha < 1$ as selected from (4)) does not necessarily ensure the satisfaction of (5). In other words, it is possible either to make or not to make the "total value-total price" thesis apply while adhering to the conditions for the progress of reproduction.

The above discussion might well be carried farther, to the consideration of such questions as the correlation between λ_1 and α, β ; the correlation between λ_1 and λ_2 (that is, the question of how much the degree of deviation of prices from values affects the final determination of surplus products and that of inter-department relations); the relations between these coefficients and the rate of accumulation; the heightening of organic composition of capital; and others. While these questions may indeed be inseparable from the present question, they will not be taken up here due to limitations on space.

Another noteworthy point about this price fixing method is that it has been supported by the operation of an endogenous price mechanism beyond the original intention of the planning authorities. In this connection, the logic used by Soviet economists with respect to this question may also deserve mention.

Take, for example, the year 1936, when a revision of the levels and system of transfer prices took place. The main aim of the revision was to prevent the whole of any particular departments, especially its leading enterprises, from going into the red. Thus the transfer prices of heavy industry products were raised, resulting in an increase in the total profit of the heavy industrial sector from 1,840 million roubles in 1935 to 3,240 million roubles in 1936. However, many heavy industrial enterprises fell back into the red again in

1938. Malafeev ascribes this mainly to the rise of wages which outpaced labor-productivity.²⁴ Iakovetz, too, who observes that the price situation had changed radically since the 1930's as mentioned earlier, bases his reasoning upon the rise of retail prices due to an increase in demand and a resultant soar of the wage portion of cost.²⁵ Such a rise in cost due to a wage rise could not be shifted on to prices as far as the heavy industrial sector was concerned. Because of the fundamental position of the price scheme that the prices of producer goods be kept at a level lower than their values (as will be seen later), the prices of producer goods had to be left as they were even if their cost had risen, or they could be raised only slightly to an extent that would not exceed the rise in the cost. For example, in 1931 the cost of heavy industrial products rose 8.0% while their transfer prices were raised by only 0.6%; and in 1932, the corresponding price rise was 3.2% against a 6.5% cost rise. The prices in such industrial sectors as coal, metals, timber and lumber, etc., in particular, were left unchanged in that year. However, in order to secure the investment funds for the heavy industrial sectors, the rate of the turn-over tax which was to be fixed on Department II products had to be raised, with a resultant rise in the prices of consumer goods. The basic reason why this rise was found acceptable was that the supply of these goods was too small to meet the people's demand. One can see that there existed a causal relation between the rise of wages and the prices of consumer goods and that these two phenomena were closely connected with supply-demand relations. Presumably one can perceive in this visible relationship the price mechanism was operating quite in the open.

However, with regard to this operation of price mechanism (even though these theorists would not use such terms), one would be erring, as they did, if one viewed merely the result side of the picture, saying that the wage rise exceeding the rate of rise in productivity caused the rise in prices.

In the first place, it cannot generally be said in terms of Marxist economics that a wage rise automatically causes a rise in prices. We would not even have to fall back upon the classics of Marxism to understand that since price is basically determined by the level of value, and also since the volume of labor input as the determinant of the level of value is not directly affected by a rise or fall in wages, a rise in wages merely means a decrease in the portion of surplus value.

Then what if the rate of the wage rise were to be viewed in relation to the rate of increase in productivity? It seems that what would immediately result when the rate of rise in wages exceeded that in productivity, would merely be a decreasing rate of increasing in the ratio of surplus value. Therefore, this would augment the cost—and this fact *as such* could *not* be a cause of a rise in prices; an immediate cause of such a price rise should be found in the attempt to maintain through prices an unabated rate of increase in the ratio of surplus value. The author may explain this as follows:

²⁴ A. N. Malafeev, *op. cit.*, pp. 187-188.

²⁵ Iu. V. Iakovetz, *op. cit.*, p. 127.

Let us assume that we can express gross social product in *real* terms as $C+V+M=W$, and that, given the *same* amount of employed labor, the volume of products has increased by $\Delta C+\Delta V+\Delta M=\Delta W$, as a result of a rise in productivity. The fact that the rate of increase of wages is higher than that of labor productivity may be shown as

$$\frac{\Delta V}{V} > \frac{\Delta W}{W} \quad (\text{A})$$

Here $M=W-(C+V)$, $\Delta M=\Delta W-(\Delta C+\Delta V)$, so

$$\frac{\Delta M}{M} = \frac{\Delta W-(\Delta C+\Delta V)}{W-(C+V)}$$

This may be transformed to obtain the following :

$$\frac{\Delta M}{M} = \frac{\Delta W}{W} \left\{ \frac{1 - \left(\frac{\Delta C}{\Delta W} + \frac{\Delta V}{\Delta W} \right)}{1 - \left(\frac{C}{W} + \frac{V}{W} \right)} \right\} \quad (\text{B})$$

The above (A) means $\frac{\Delta V}{\Delta W} > \frac{V}{W}$. And the larger $\frac{\Delta V}{V} - \frac{\Delta W}{W}$, the larger becomes $\frac{\Delta V}{\Delta W} - \frac{V}{W}$. From (B) we can see that the larger the value of $\frac{\Delta V}{\Delta W} - \frac{V}{W}$, the smaller becomes the value of $\frac{\Delta M}{M}$. However, because $\Delta M > 0$ until $\Delta C+\Delta V=\Delta W$ an increase in surplus value can still be seen. Therefore, it can be said that a direct outcome of the situation where the rate of increase in wages exceeds that in productivity should be a *decline in the rate of increase* in the ratio of surplus value. If we attempt at this stage to maintain the rate of increase in the ratio of surplus value as high as ever, the only way to achieve this aim would be to increase the nominal value of surplus products in price terms. This would in turn mean a virtual devaluation of the prices of products other than the surplus product.

While thus it is completely erroneous to try to explain the price rise as a direct outcome of the rate of wage increase exceeding that of productivity, we cannot overlook the fact that the views of the Soviet economists do reflect the realities of their country. That is, the causal relation between the rise of the prices of consumer goods and that of wages and the relation of this rise to supply-demand relations are connected inseparably with the economic growth strategy, that is, the policy of emphasis on heavy industry. And the only way to save this causal relation from becoming a vicious cycle could be sought only in endeavoring to realize a rapid increase of productivity throughout the national economy on the strength of the expanding productive power which is quickly materialized as a result of the preferential development of heavy industry.

Now, on the basis of what has been discussed, we may say the following : The significance of the differential price policy between producer goods and consumer goods lies in the fact that the policy was suitable for concentrating the greatest possible amount of national income in the hands of the state treasury in the form of accumulated funds under the given conditions of a

chronic short supply of consumer goods and, accordingly, of the strong pressure of popular demand for these goods.

The following are accepted as the merits of the price-setting policy: It was effective in (1) confining the rise in prices of producer goods to a certain area and keeping it from having a spread effect on the prices of consumer goods; (2) facilitating the introduction of advanced technological equipment to all sectors of the national economy through setting the prices of producer goods at a low level; (3) enabling the state to proceed with its intensive investment program, etc. However, it still seems to be questionable whether these points have actually been achieved well enough by the above policy (especially (1) and (2)); or, even if they have, whether the same might not have been attainable through some other price fixing method (especially so about (3), and also (2)). It must be said that these three points represent what may be called secondary functions of the price-fixing policy, whose primary function was to concentrate the greatest possible amount of national income in the hands of the state treasury for investment purpose.²⁶

IV

To be sure, price policy based on differential formation of the prices of producer goods and consumer goods has played a vitally important role in creating and consolidating the foundations of heavy industries. Under the harsh historical and international conditions in which the Soviet regime had to undertake its industrialization on the basis of preference for heavy industries, the various problems which arose in all aspects of national life would most probably have bankrupted this growth strategy if the progress of events had been left solely in the control of a spontaneously operating price mechanism. In that case more of the national income would have gone to agriculture and light industries. In this sense, this price policy found its *raison d'être* in breaking down the spontaneous operation of the price mechanism. At the same time, however, it had to be enforced in the very home ground of the price mechanism—a fact which made it unavoidable for the policy to respond to the mechanism at each problem encountered, so that prices might be fixed in a way which would be in the best interest of rapid development of heavy industries. It was not the price policy of a genuine socialism; it was rather a transitional policy. The real test of the function of prices in a genuine socialist economy is just beginning to appear with the unfolding of the current phases of the Soviet economy. There the price policy would be based on prices which reflect *more or less* exactly socially necessary labor volume. Socialist planning would consist in formulating the strategy of a national economic plan through consciously managing the relationship between

²⁶ It cannot be denied that, under the historical conditions of the national economic organization of production in those days as well as to date, these three points each hold great significance. Further discussions on these points in more concrete terms and in relation to historical conditions have yet to be undertaken.

individual labor input and their social evaluation. And in so doing, it would have to confront the question of how to make the price mechanism function rightly. Any plan, however, centralized it might be, ought to leave some room for such situations or cases which it could not have well in hand as, for example, those arising from changes in productivity of labor. (This is why the author qualified his above statement by "more or less.") And it should become necessary to pose once more the question of how to relate this "reste," so to speak, of a plan to its "somme" both from the viewpoint of national economic efficiency and, connected inseparably with it and more fundamental yet, from the standpoint of resuscitation of man as his own master, which must be the goal of socialism. Of course, such a question has been involved with and grown in the very process of creating the foundations of heavy industries and establishing the national economy upon them. And the gradually changing situation of Soviet prices demonstrates clearly enough that the necessity above mentioned has matured. That is, even if the prices of producer goods were fixed at a level lower than that of their values, the ever rising level of productivity throughout the national economy has lowered the costs and promoted a process in which *values approach prices*, rather than the other way round.