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NEW DIRECTIONS IN THE
SOVIET ECONOMY

STUDIES PREPARED FOR THE
SUBCOMMITTEE ON FOREIGN ECONOMIC POLICY
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

Part I
ECONOMIC POLICY



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LETTERS OF TRANSMITTAL

JUNE 27, 1966.

To the Members of the Joint Economic Committee:

Transmitted herewith for the use of the Joint Economic Committee, and other Members of Congress, is a study of current economic developments in the U.S.S.R. entitled "New Directions in the Soviet Economy." This is the latest in a series of studies of the Soviet economy supplemented by hearings which the committee has published periodically since 1955. The present comprehensive research study is designed to provide the committee and the Congress with factual data and authoritative interpretative comment on the economic performance of the Soviet Union.

The committee is indebted to the many contributors and agencies, listed in the letter of the Executive Director, who have given so generously of their time and abilities to complete this outstanding project.

Of course, the views expressed in these materials are those of the individual contributors and do not necessarily represent the views of the agencies with which they are connected, this committee, its individual members, or the committee staff.

Sincerely,

WRIGHT PATMAN,
Chairman, Joint Economic Committee.

JUNE 23, 1966.

HON. WRIGHT PATMAN,
*Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.*

DEAR MR. CHAIRMAN: Transmitted herewith is a study of current economic developments in the U.S.S.R. entitled "New Directions in the Soviet Economy." This comprehensive research study is designed to be responsive to the continuing interest of the committee and the Congress in objective factual data and relevant interpretive comment on the economic performance of the Soviet Union in comparison with other industrially developed nations of the world. This is the latest in a series of hearings and studies of the Soviet economy published periodically by the committee since 1955.

The present study has been prepared in the form of a symposium embodying a selected range of professional papers contributed by invited specialists in their respective fields drawn from the departments of the Federal Government in Washington, the universities, and private research organizations. The committee is indebted to these contributors who have given generously of their time and expertise to provide the latest available information and competent

analytical perspective on this important subject. They are the following:

Michael Boretsky	Hertha W. Heiss
Morris Bornstein	Leon M. Herman
James W. Brackett	Holland Hunter
David W. Bronson	Jerzy G. Karcz
Keith Bush	Katherine Miller
Stanley H. Cohn	Edmund Nash
John W. De Pauw	Roger E. Neetz
Nicholas DeWitt	James H. Noren
Douglas B. Diamond	Seymour M. Rosen
Maurice Ernst	Barbara S. Severin
Imogene Erro	Timothy Sosnovy
Murray Feshbach	Leo Tansky
Dimitri M. Gallik	Vladimir G. Trembl
Rush V. Greenslade	Harry E. Walters
John P. Hardt	

The committee wishes to avail itself of this opportunity to express its appreciation of the wholehearted cooperation it has received from the following agencies of the executive branch:

Bureau of the Census.	Department of Agriculture.
Department of State.	Library of Congress.
Central Intelligence Agency.	Department of Health,
Department of Commerce.	Education, and Welfare.
National Science Foundation.	

Of course, the views expressed in these materials are those of the contributors and do not necessarily represent the views of the agencies, the committee, individual members thereof, or the committee staff.

The committee is also grateful to the academic institutions that made it possible for their faculty members to contribute valuable assistance to this enterprise, namely:

Franklin and Marshall College.
 Haverford College.
 Indiana University.
 The University of California at Santa Barbara.
 The University of Michigan.

Likewise, the committee extends its thanks to the Directors of the Research Analysis Corp., McLean, Va., and to the Radio Liberty Committee of New York, for placing at its disposal, for the purpose of this study, the valuable services of their specialists in this highly demanding field of economic research.

A particular expression of thanks is hereby extended to the Legislative Reference Service of the Library of Congress for assigning to this project their senior specialist in Soviet economics, Leon M. Herman, who was involved from the beginning in planning the scope of research and coordinating the required contributions for the present study. The study was supervised at the committee level by John R. Stark, Deputy Director.

Sincerely,

HALE BOGGS,
Chairman, Subcommittee on Foreign Economic Policy.

NEW DIRECTIONS IN THE SOVIET ECONOMY

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NEW DIRECTIONS IN THE SOVIET ECONOMY

INTRODUCTION

The Soviet Union is currently engaged in a searching reexamination of its own economic past. With the evident approval of the political leadership, the entire economic community has become involved over the past few years in a far-ranging discussion that has subjected to severe scrutiny many of the institutions of the command economy established in the U.S.S.R. since the late twenties. By all accounts, this earnest public discussion has brought into the open a growing awareness within Soviet society that the guiding ideas as well as the administrative machinery employed during the past several decades for the planning and management of the domestic production system have become progressively less effective, less responsive to the unrelenting efforts of the political authorities to advance the competitive position of the U.S.S.R. in the world economy.

Most immediately, of course, the political authorities are concerned over the loss of momentum sustained by the economy of the U.S.S.R. during the past 5 years. In his address to the recently concluded XXIII Congress of the Communist Party of the Soviet Union, the chief economic planner of the nation, Mr. N. K. Baibakov, solemnly reported to the assembled political elite of the country that "despite the high and stable average annual rates of investment in expanding the productive capital of the economy" the tempo of economic growth declined from an average rate of 8.2 percent, maintained during 1956-60, to 6 percent during the most recent 5-year period [1961-65], according to the official Soviet index.

While a declining rate of growth is in itself an unpalatable fact in the Soviet political mystique, the economic leaders of the U.S.S.R. are at present more urgently addressing themselves to the problem of isolating and removing the basic causes of this ideologically disturbing phenomenon. They are aware that in a high investment economy, such as theirs has been over the past four decades, a decline in the rate of growth of the national product must be viewed as a serious cause for alarm over the state of health of the economy. There is, in fact, a distinctive note of alarm in the analysis presented by Chief Planner Baibakov, in the same address, to the effect that "gross production per ruble of fixed productive capital has declined, in industry as well as in agriculture." Although expressed with a calculated lack of emphasis, the implication of this statement would suggest that the top leadership considers such a state of affairs to be both abnormal and intolerable, and that they are determined that the Soviet economic community should, in the future, apply itself with more energy to the development of more efficient methods and institutions for the utilization of the abundant economic resources of the Nation. This urgent search for a more effective division of responsibilities in the complex process of economic decisionmaking is the subject of the present study.

For the preparation of this study, the committee has invited a group of eminently qualified specialists to review the recent record of economic performance and the discernible direction of economic policy in the Soviet Union. We have asked our contributors to try to examine recent developments in their respective fields in the light of a number of general criteria, such as (a) the character and impact of current economic reform measures; (b) the comparative standing of the Soviet Union among the major economies of the world; and (c) the relative efficiency of resource allocation and utilization in the U.S.S.R.

What emerges from the collection of papers comprising the present study is a solid body of evidence to the effect that the performance record of the past few years has persuaded the Soviet leaders to re-examine their traditional approach to decisionmaking in the economy in a more critical light than ever before in the past. Under the pressure of events Soviet leaders have gradually come to accept the main line of analysis of the less doctrinaire economists in the country, namely that the recent loss of steam in the national economy has been brought about by a sustained excessive emphasis, over the decades, upon high quantitative targets and by the consequent neglect of the essential qualitative values in economic development. One manifestation is the increased dislocation between supply and demand. The neglected values most frequently cited at present by the more outspoken economists in the Soviet Union occur in respect to the following objectives:

- (a) The quality and durability of finished goods;
- (b) The close alinement of production with modern technological possibilities;
- (c) The automatic adaptation of production to demand;
- (d) The minimization of inputs used to obtain a given volume of output;
- (e) Optimal use of investment resources;
- (f) Mutually agreeable terms of trade with the agricultural sector.

It must be abundantly clear to the political authorities in the U.S.S.R. that any promising effort to recapture these indispensable qualitative values in economic development would, in the present environment, involve a substantial modification of existing institutional arrangements for economic decisionmaking, above all the system of economic incentives for the managerial staffs and workers of the thousands of production enterprises in the economy.

Yet, the Soviet leaders continue to be faced by an inescapable dilemma in the realm of economic reform. They are fully aware that there is a predictable correlation between the extent of the reform measures to be introduced and the degree of improvement that could be reasonably expected to result from such reforms. A narrow, or superficial program of reform could not possibly be counted upon to generate a dramatic improvement in economic performance. In order to achieve a perceptible improvement in economic efficiency, therefore, the reforms in question would have to be both extensive and substantive in character. However, in the event that a system of far-reaching reforms is instituted in the economy, there is no advance

assurance for the leadership that such a process of transformation would not disrupt the whole intricate web of centralized control levers that makes up the authoritarian political system of the U.S.S.R.

Beyond the more immediately pressing need to reform the administrative mechanism for planning and managing the national economy, the Soviet Union is today confronted by the very real problem of how to make its industrial production system more sensitive to the advancing tempo of technological change in the world at large. Soviet industrial plants must be given more freedom to maintain closer contact with research-conscious producers in the industrial countries of the West. No nation today can afford to remain isolated from the mainstream of technical progress if it wants to enjoy the fruits of the steadily rising standards of productivity in the world economy. This basic fact has evidently been accepted by the Soviet leadership, along with its implications for policy, as suggested by the following passage from the address by Premier A. N. Kosygin delivered to the recent [April 1966] XXIII Party Congress:

It is becoming more and more obvious in our time that the scientific and technical revolution at work in the modern world calls for freer international contacts and creates conditions for broad economic exchange between socialist and capitalist countries.

By way of indicating to his listeners that the above conclusion was based on recent practical experience, the Premier added that:

In the past 5 years foreign trade helped us solve a number of important economic problems. * * * The time has come for us to reappraise the role of foreign trade.

This implied acceptance by the Soviet Government of the revolutionary idea that technical progress is indivisible, along with its recognition that increased trade with the more intensively industrialized nations is an economic necessity for the U.S.S.R. today, provides us with important evidence of the kind of pragmatism that has recently come to influence the direction of economic reasoning among the ruling elite of the U.S.S.R. It does not, of course, amount to an outright repudiation of the traditional policy of autarchy. But it does represent a significant shift in emphasis, a shift away from the putative political hazards of trade to its measurable economic benefits. In this respect, the present quest for more efficient ways to use the abundant resources of the economy and for higher incomes for the population hold out a real promise of a gradual change toward the predominance of economic considerations over political motives in the future relations of the Soviet Union with the nations around the world.

Part I. ECONOMIC POLICY

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THE SOVIET ECONOMIC SYSTEM IN TRANSITION

BY

RUSH V. GREENSLADE

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THE SOVIET ECONOMIC SYSTEM IN TRANSITION

Let us admit the case of the conservative: If we once start thinking, no one can guarantee where we shall come out, except that many objects, ends, and institutions are doomed.—John Dewey.

In October 1961 Communists from all over the globe gathered in Moscow for the 22d Party Congress. This ceremonial assembly was the crowning achievement of Khrushchev's party career. At the previous Party Congress in 1959 he had announced the final victory of socialism and the advent of a new historical stage of development, the all-out building of communism. At the 22d Congress he completed the process of ousting Stalin from his place in the pantheon of party greats, and even from his resting place in the mausoleum. He staked his own claim to a seat on the right hand of Lenin by promulgating the party's 20-year program, upon the completion of which the U.S.S.R. would have arrived at or near the stage of full communism.

Economic growth at a tumultuous pace was so well established under socialism (after Stalin's errors had been corrected by Khrushchev) that a time table for the advent of communism could be set by economic milestones. The first and most breathtaking, catching up with the United States in industrial production, was promised for 1970. After that, the satisfaction of all economic needs and desires, "all that a man could reasonably want," would be within the grasp of the bountifully productive socialist economy. According to the party program, food supply would double, there would be an apartment for each family, and services would be increasingly provided free of charge.

The contrast between the old man's illusions and the present economic conditions and prospects could hardly be more obvious. Since the 22d Party Congress, agriculture has progressed so little that wheat, which was formerly exported, has been imported for the last 3 years. Soviet GNP has not gained on U.S. GNP and may even have lost a little. Industrial production has gained very little on U.S. production. Urban housing has barely kept up with urban population. Throughout the land the great slogan of catching up with the United States in 1970 is heard no longer.

More chilling to party hopes than these economic developments is an apparent loss of faith in the economic system itself. In 1961 the system of central administrative direction of the economy under the tight rein and driving whip of the Communist Party was unquestioned—at least publicly. Since then, first academicians, then economic administrators and now the highest party leaders have openly acknowledged the grave deficiencies of the command economy.

Was the premise of the 21st and 22d Party Congresses correct; that the construction of socialism was finally completed and the material base for communism laid? Subsequent experience suggests that the premise was not quite true. State ownership is accomplished; indus-

trial capacity has been built; but this capacity still provides little for Soviet consumers, and more important, the economic organization, whatever its past triumphs, is now found wanting.

Premier Kosygin's speech to the Party Plenum in September 1965 proposed a series of reforms in economic organization, the inspiration for which was not Karl Marx or Lenin and certainly not Stalin. Its intellectual sources were the late Oscar Lange, the experience of Yugoslavia, and the writings of the liberal faction of the Soviet economic profession. The proposals include the first timid steps away from tight central direction of the economy and toward a market socialism. Many westerners anticipated much bolder steps and were disappointed at the vague and partial program outlined by Kosygin. The boldness of the step, however, is much less significant than the direction. It is a step that will be very difficult to stop or reverse. The future course and ultimate destination of the reform, however, is far from clear.

Kosygin's proposals follow from a complex of developments—economic, intellectual, and ideological—which, starting slowly after the death of Stalin, have unfolded with astonishing speed in the last few years. Although the depth and the diversity of this evolution argue for its irreversibility, they do not provide a chart of its future directions. The survey that follows will review the highlights of the economic changes of the last 10 years as they bear on future possibilities. These are:

1. The slowdown in economic growth;
2. The revolution in economic thought;
3. The developments in economic organization.

I. THE SLOWDOWN IN ECONOMIC GROWTH

The slowdown of economic growth in the U.S.S.R. is now a well-known story. The recent State Department press release, *U.S.S.R. Falters in Economic Growth Race With the United States*, sets forth the main measures of Soviet growth. These measures show that in 1961-65 as compared with 1956-60, the average annual rate of growth of GNP fell from 6 percent to 4 percent; the growth of industrial production dropped from 8 percent to 6 percent, and that of agricultural production from 3½ percent to 2 percent. An even more dramatic change would appear, both for industry and agriculture, if growth were measured from 1950 instead of 1955. Other measures confirm and extend the story. According to Soviet statistics, the average annual growth of state fixed investment dropped from 12 percent in 1950-59 to 8 percent in 1960-64; the growth of overall investment (that is, including private and kolkhoz investment) declined from 13 percent to 6 percent. The average annual rate of increase in consumption was 6.8 percent in 1950-59, but 3.9 percent in 1960-64.¹

Soviet announced statistics of national income and industrial production show much the same slowdown in growth as the Western calculations, and Soviet press comment has explicitly admitted the retardation. Premier Kosygin described it in these words in his speech at the Party Plenum in September 1965:

¹ See the paper by Barbara Severin and David Bronson in this volume.

It should be noted that in the past few years there has been a certain decline in national income and industrial output per ruble of fixed production assets. The rate of growth of labor productivity in industry, which is also an important index of the effectiveness of social production, has slowed down somewhat in recent years.

The fact of the slowdown is clear, but the explanation is not. The sudden retardation does not correlate with any observable events that can serve as plausible causes, except in the important case of agriculture. In agriculture the one-time gain from the new lands added to the growth between 1954 and 1958. A similar short-term gain resulted from the programs to boost the production of corn, milk, and meat. Following 1958 the declining yields in the new lands contributed to the slowdown.

Changes in inputs other than land do not account for the slowdown. Man-hours of labor actually rose more rapidly after 1960, and the growth of capital stock continued at about the same rate. Rather, the key variable has been productivity. The production slowdown is reflected in declining rates of growth of the productivity of both labor and capital. Thus an index of factor productivity (labor and capital combined) would show a decline.² This trend is in contrast to Western Europe as a whole, where the rate of growth has not slowed noticeably, and where in most countries both labor and capital productivity have continued to grow at a steady pace.³

The growth in factor productivity is supposed to reflect the impact of new technology, improvement in management, and the quality of labor, among other things. The Russians have alluded to the first two of these as causes of the slowdown. Kosygin, for example, said:

At present industry has entered a period of development when its rate of growth will be determined to an ever-increasing degree by technical progress, the swiftest possible application of scientific achievements in production. Meanwhile, we have substantial shortcomings in this matter * * *. The forms of industrial management, planning, and incentive now in effect no longer conform to present-day technical-economic conditions and to the level of development of production forces.

A Western writer has found that the third was also a contributing factor. (See footnote 3, p. 5.)

The slowdown in factor productivity has gone on too long to be merely temporary. It is a striking development. It blunts the edge of the one sharp tool of Soviet economic planning, the high rate of savings and investment. The long established priority and faster growth of investment over consumption once seemed able to go on forever, and as long as new technological opportunities were still available, rapid growth seemed assured. Now, however, the conditions for growth have changed.

Most observers would have agreed that the rate of growth of the Soviet economy must eventually slow. But the suddenness of the change, like a horse going lame, surprised many, including this writer. Two important developments in the late 1950's, the surge of defense expenditures and the shortening of the work week from 46 to 41 hours, surely contributed to the timing and magnitude of the slowdown in growth and in productivity. The direct effect was a loss of labor and

² See papers by James Noren and Douglas Diamond in this volume.

³ See paper by Stanley Cohn in this volume.

capital inputs into the civilian economy. Indirectly, by preempting for the advanced weapons programs the most efficient research and development resources—men, materials, and equipment—the defense effort must also have contributed to the drop in the effectiveness of new investment. However, this still leaves unanswered the questions of why the system was unable to adjust to these developments and why the growth of factor productivity continued to be slow through 1965.

A critical factor seems to lie in the ability of the system to cope with technological complexity and change. In *The Economics of Soviet Planning*, Professor Bergson⁴ presents a comparison of Soviet and United States net national product in 1960 in both dollar prices and ruble prices and of the respective capital and labor inputs. Soviet net national product per unit of input ranges from two-fifths to two-thirds of that of the United States according to various alternative calculations. This large difference suggests a still massive technological lag in the U.S.S.R., a suggestion that is confirmed by Western observations and by Soviet reporting on the technological backwardness of the chemical industry (e.g., synthetic fibers), petroleum refining, highway transportation, consumer durables, animal husbandry, and many other activities. Investment opportunities with high net yields, of the kind that Western Europe and Japan have been reaping lately, are still available in profusion to the U.S.S.R. But the growth of output has slowed to rates now less than in the United States. The difficulties in the current period thus apparently stem from an inability to take advantage of new technology. This situation contrasts sharply with the impressive results of the wholesale adoption of new techniques in the thirties. But whether the nature or the complexity of new technology have changed, or whether the poor recent performance was inherent in the system is still arguable.

There is much to be said for Professor Nutter's thesis,⁵ that Soviet policy has been to concentrate on those products for which the largest reduction in cost could be expected. These happened to be steel, fuel, electric power, and a few standard machinery items. The slowdown can thus be viewed in the first instance as the result of running out of easy investment opportunities. The most dramatic illustration of this is the shift of investment to agriculture, where returns are small. The planners have long hesitated to invest in irrigation and drainage of swamps, because these investments are very expensive. Now urgent need is forcing the shift. Fertilizers, plastics, and synthetic fibers also represent heavy investments for still doubtful gains. Khrushchev vigorously sold the program for new chemicals with hypothetical and unrealistic cost figures. In exactly the same way, the great success in steel production was difficult to follow up with thin cold rolled sheet capacity, even when the need became obvious. More than any other system in history the Soviet economy has depended for its growth on economies of scale, for the very good reason that versatility is its weakest point. One apparent, but illusory, advantage of being behind is that an underdeveloped economy can concentrate on selected

⁴ Abram Bergson, "The Economics of Soviet Planning," Yale University Press, New Haven, 1964, p. 342.

⁵ G. Warren Nutter, "On Measuring Economic Growth," *Journal of Political Economy*, February 1957.

sectors in the plausible belief that large capacities will ultimately be necessary; other sectors, it is argued, can come later and can also gain from concentration. The Soviet development strategy has been one of selecting priorities on grounds of production cost rather than of utility. However, a natural consequence of doing easy things first is that hard things eventually come due.

In discussing the recent economic developments, Soviet economists accept without question the past development strategy and use it to justify the economic system that went with it. They have adopted the argument that centralized planning and control was necessary and desirable at the earlier stage of rapid industrialization, but that the economy has now become too large and complex to be planned in detail at the center. Present conditions call for some decentralization, as in the current reforms. By implication, the complexity of the economy accounts for the slowdown. This argument is only half right at best. The Russian economy was too complex for central planning right from the start of the 5-year plans. These plans were fulfilled, if at all, only by the high priority sectors, mainly heavy industry. But, by Stalin's simple scale of priorities, this was success enough.

The priorities and wants of the present leaders have multiplied prodigally. Agriculture of necessity has become high priority and a large claimant on investment resources. The seriousness of the housing shortage is recognized. With respect to clothing and shoes, the leaders are striving not only for greater quantities, but also for acceptable quality. Finally, consumer durables, even automobiles, are being promised and scheduled for large increases in the new 5-year plan.

These expanded wants create a much more difficult managerial problem than Stalin's single-minded approach. There are no entrepreneurs in the U.S.S.R., none working for the state at any rate. Or rather, there is only one, the leadership. When the leadership initiates more activities than it can control and manage, management and control drift inexorably into the hands of an amorphous bureaucracy. To say that the economy has become more diverse, complicated, and specialized is only to say that the leaders now want more activities than they can manage. In particular they now want a variety of finished goods as well as intermediate goods.

The expansion of the Soviet regime's wants and priorities is a development that was inherent in its strategy from the beginning. The rationale of the industrialization drive of the thirties and again in the early postwar period was that the building of heavy industry was a precondition for and the quickest way to obtain a profusion of consumer goods. The desirability of this strategy of development and of the organization that implemented it must be judged not by its success in achieving its immediate objective of building a heavy industry capacity but by the success in reaching its ultimate objective of producing consumer goods.

The Soviet economy's poor performance in the production of consumer goods is well known. It is also clear that the Soviet notion that a massive intermediate and capital goods capacity will automatically produce a finished consumer goods capacity still remains to be

vindicated. To be sure, the right kind of intermediate and capital goods capacity could produce plant and equipment for consumer goods, but the present leaders are finding that the capacity they inherited from yesterday's planners is not the right kind. The machine-building industry has still not been able to produce a respectable line of agricultural machines. When the time came to build plants for plastics and synthetic fibers, Soviet industry had neither the know-how, designs, equipment, or materials for the job. The Soviet-built plants have experienced inordinate delays in construction and in achieving capacity output after completion. The growth of these modern chemicals has depended in large part on imported plants. The machine tool industry, which has outproduced all others in the world in number of machine tools, is not able to equip a modern automobile plant. In order to meet the new 5-year plan for automobiles, the Soviet leaders have turned to Fiat in Italy to provide an automobile design and a complete manufacturing plant. Other consumer durables reflect the same problem—the lack of versatility and flexibility of Soviet heavy industry, which was primarily designed to reproduce itself.

The ability of Soviet industry to produce a variety of apparently effective advanced weapons and space equipment is an exception which proves a more general rule: that what success Soviet industrial management has had has been due to concentration on a few high priority fields.

Another familiar characteristic of Soviet management is emphasis of quantity at the expense of quality. A consequence of this emphasis is that the seemingly enormous stock of capital requires large amounts of replacement capital, repair and maintenance service, and spare parts. Instead of being a versatile productive machine ready to turn out a stream of consumer goods, the Soviet economy is an insatiable consumer of resources. Thus, the large number of tractors and agricultural machines reported idle and awaiting repair testifies to the frequency of breakdown as well as to the shortage of spare parts. Another statistic widely cited in the Soviet press is that repair work occupies 29 percent of the workers in machine building and metalworking as well as one-third of the machine tools. To a considerable degree the CPSU has sold its birthright of saving for a mess of intermediate pottage.

An extended research could compile a mountain of inefficiencies and wastes in the Soviet economy. The brief survey here is intended only to give the flavor, not the quantitative measure of the disequilibrium. My purpose is only to argue that no simple solution is open to the Soviet leadership. Kosygin and Brezhnev may identify and correct each of Khrushchev's mistakes, but the list of mistakes still remaining to be corrected will be no shorter. The command system has no recourse but to give commands, and it is as clear as can be that no commands can cure the economic troubles of the U.S.S.R.

How serious is it for the CPSU to accept the slower growth and give up the hope of catching the United States or even Western Europe in per capita production? The party's platform for the people has always been the future; indeed, the party justified the sacrifice of well being, freedom, and even life in the present as the necessary price

of Utopia in the future. It is hard to see how the party could give up its central ambitions of success for its system, welfare for the people, and world power for itself. Reconciliation with a moderate growth and a pale and lagging imitation of Western life could be bought by a forgetting and forgiving by both the party and the people that is hard to conceive. What role the party's economic program plays Khrushchev explicitly revealed at the 22d Party Congress:

The party's third program heralds the coming of a period in which all the difficulties and privations which the Soviet people have endured for the sake of their great cause will be made good a hundredfold.

The party surely will not accept economic stagnation without a fierce struggle or without attempting to substitute some other emotive goal for that of catching up with the West. Any alternative goal—such as rapid growth in standard of living—is likely to be no easier to attain than the restoration of rapid overall growth. The dilemma for the party is that the causes of the slowdown and the party's tangible *raison d'être* are rooted equally deep in the system.

II. THE REVOLUTION IN ECONOMIC THOUGHT

Stalin, living, lay like a dense smog over Russia, smothering the people, their minds, and any words other than his own imbecilic slogans. His death was a release from suffocation for the party, and the clearing wind of his passing let a few rays of hope gleam even for ordinary people. Gradually men began to do what men do naturally, to think, to ask what they are after, to use their brains to tackle problems. The party leaders themselves were no less eager to make fresh beginnings, to forge new tools and new ideas, although the ideological goals remained the same. In due time economists were cautiously invited into the problem-solving process. The assignments were narrowly prescribed—the effectiveness of investment and the basis for pricing—but the process of thought, once started, leads from one thing to another. Under a disguise of mathematics those interested in economic problems soon were exploring far beyond the boundaries that the party had marked for their inquiry.

The image adopted by the Russians for Stalinism and its aftermath was the "freeze" and the "thaw." But the upwelling of economic thought over the last 10 years testifies that minds were not frozen, even if tongues were. As one Western writer has shown, Soviet economists in only a few years have recreated all of the essential features of Western economic theory.⁶ With the Marxist labor theory of value as the point of departure, this in an impressive leap forward.

The labor theory of value states that the price of a product (in the long-run) should be equal to the labor costs of producing it including, of course, the labor costs of the material input and of the capital consumed. This begs the questions of how wages are set. The Soviets, however, have long since recognized the usefulness of supply and demand for wage setting. The elements missing from the labor theory of value that are crippling to analysis of the Soviet economy are:

1. Charges on capital and land—i.e., interest and rent.
2. The role of demand in pricing and hence in the guidance of production.

⁶ Robert W. Campbell, in *Slavic Review*, October 1961, pp. 402-18.

3. The pivotal function of profits in transforming the price signals into compelling incentives for producers.

All three of the elements are now openly recognized and discussed in Soviet economic literature. Furthermore, they are now also explicitly guiding organizational proposals. All three elements were highlighted in Kosygin's speech last September on improving the economic system.⁷

The stage of development of economic thought that lay behind Kosygin's speech was arrived at by way of many bitter intellectual and ideological battles. When Kantorovich's path-breaking presentation of linear programming, *The Best Use of Economic Resources*, was published in 1959, it was very unfavorably reviewed by two leading conservative economists, Boyarskiy and Katz. Kantorovich recommended the use of a set of "shadow prices" that would reflect the scarcity of products relative to demand. Reviewers correctly pointed out that this approach directly contradicted the labor theory of value. The argument sputtered on for years until the piling up of unsalable inventories of consumer goods made the discussion silly. Now, Soviet writers talk freely about demand. Even the notions of utility and marginal utility are mentioned⁸ though certainly not widely accepted.

The ideas of interest and rent have slowly but persistently crept into the discussions of effectiveness of investment. The impetus for this was simply the obvious waste of capital goods going on all around. Liberman's proposal to use the ratio of profit to capital stock as an indicator of enterprise performance was intended to promote economy in the use of capital. Other economists simply advocated an interest charge, a point of view that met determined resistance. Speaking in 1964 to the conference on the use of mathematics in economics, the dean of Soviet economists, Strumilin, still held out against the use of such a capitalistic device.

Profit was dramatically thrust into public discussion by Liberman in 1962. By then the advantages of profit incentives were so generally accepted that the conservative school confined its objections to the use of profit as the only success indicator. The conservatives argued that it should be only one of many, and they said in particular that fulfillment of the output plans must still be required; otherwise, there would be no plan. This is certainly true. If profit and prices alone guide production, then planning as the Soviets know it is out of business.

Although the advocates of reform devote endless pages to proving that profit, demand and a charge on capital are not inconsistent with Marxist theory or with Lenin's views, it is plain to see that the inspiration for all the new ideas is Western economic theory and practice. The objections of the conservatives center on this point. No Soviet writer, up to now, has dared to assemble the separate elements into a unified theory, for such a theory would simply be the marginal economic analysis that is familiar in the West. By talking of each element separately in the context of the present system of planning, the reformers disguise the fatal similarity to capitalist thought.

A nearly disastrous split between two schools of reform delayed the influence of the reformers for several years. The two schools

⁷ Pravda, Sept. 28, 1965.

⁸ For example, A. L. Vaynshteyn at the conference on the use of mathematics in economics, *Voprosy Ekonomiki*, No. 9, 1964, p. 75.

were (1) the advocates of improving central planning through mathematical methods implemented by computers, and (2) the decentralizers, who wished to reduce the scope and detail of planning and to rely more on profit incentives and initiative at the enterprise level. Older economists, like Nemchinov, wrote as if both approaches were necessary, but the issue grew sharper as the younger cyberneticists, e.g., Glushkov, seemed to argue that decentralization was unnecessary since in a few years computers would be able to solve economic problems much more efficiently than enterprise managers.

The conservatives, or retrogrades, as the reformers affectionately called them, skillfully exploited the split by supporting mathematical methods while opposing the use of profit as the primary indicator in the mathematical formulations. The controversy broke into the open in the spring and summer of 1964 in a series of articles published in *Literaturnaya Gazyeta*. In these articles the conservatives proposed that mathematics be used to solve particular problems, such as transportation scheduling, and that computers be used simply for calculation and accounting. They denounced profit. The reformers shrilly defended both mathematical planning and profit.

As time passed, the complexity of the practical problems in comprehensive mathematical planning became clearer and clearer. An input-output table for the year 1959 was assembled, but the effort revealed how inadequate was the existing information reporting system. Moreover, the result was far too aggregative for use in detailed planning. In 1963 a mathematical economist pointed out the impossibility of planning and accounting for every nut and every bolt in every province.⁹ Mathematical economists began to speak in terms of decades instead of years to bring planning under the wing of mathematics. Aganbegyan, one of the leaders of the mathematical school, was quoted in 1964 as follows:

The problems of the application of electronic computers in planning and in economics are being studied in Moscow, in Kiev, at our organization in Novosibirsk and in other laboratories in the Soviet Union. However, these efforts are still insignificant, simply insignificant.¹⁰

Finally, computers were being improved and made available much more slowly than it was hoped.

The ranks of reform economists were finally closed in 1964 at the conference on mathematical economics in Moscow. The issue was decided in favor of merging the use of mathematics with decentralization. Although a few conservatives fought a half-hearted rear-guard action, Kantorovich—the inventor of linear programming and the most famous of the Soviet mathematical economists—made the key speech, in which he endorsed economic levers, reduced planning, and decentralization. He called for a greater degree of “* * * the replacement of imperative indications with the utilization of more flexible and sometimes more effective economic levers of regulation.” And he said:

At the same time the economic evaluations obtained in the compilation of the general centralized plan with the aid of mathematical optimization make it possible for *efficient decentralized* decisions to be made along with an achievement of coordination between the profitability of enterprises and national economic profitability. * * *

⁹ *Ekonomicheskaya Gazyeta*, Mar. 30, 1963.

¹⁰ *Literaturnaya Gazyeta*, May 14, 1964.

The principle of unified centralized planning of the main directions of economic development that has fully proven itself will be preserved in effective combination with *considerable freedom and initiative at the local level.* * * *¹¹

Accompanying the positive theorizing has been a rising clamor of criticism of things as they are. The testimony of enterprise managers and other local economic officials has provided an overwhelming list of bad practices and performances as regards quality or usefulness of product, allocations of materials, the effectiveness of investment, automation plans, design of equipment and the work of design bureaus, the rules governing hiring of different kinds of labor (e.g., the ratio of clericals to engineers), the inappropriateness of incentives and prices. The recommendations are various and usually parochially narrow. They almost always call for reform of central bureaucracies or reduction of interference from above.

As things stand now, Marxist economic theory is being increasingly bypassed, and all new initiatives derive from Western theory and practice. The only question is how far and how fast market processes will be adopted. The current debate is between the use of markets to make the plan work better and the use of markets to replace the plan. Although Sukharevsky¹² stated the official position to be the former, his emphatic defense of the plan bespoke a bitter and unresolved conflict raging behind the scenes, and his conclusion was belied by his own arguments that the scope and detail of the plan could and should be reduced.¹³

The comprehensive central plan is the last defense of the party's economic ideology. The skeptics will ask: If the plan can be replaced, what was the use of adopting it in the first place? Nevertheless, if the current partial reforms do not work, the only advice that will be advanced will be to move further in the direction of market socialism. No other body of reform thought has any standing in the Soviet economic profession.

III. THE DEVELOPMENTS IN ECONOMIC ORGANIZATION

On September 27, 1965, Premier Kosygin delivered his remarkable speech to the Central Committee on reorganizing the economy. A large part of the speech dealt with a change from the *sovnarkhoz*, or territorial organization, to a ministerial form. The interesting proposals, however, dealt with incentives and increased freedom for enterprises. As such, they constituted, along with the experiments of 1964-65, the first official move away from the principle of centralized state planning.

All of Khrushchev's many reorganizations were simply a shuffling of boxes, the replacement of one organ of command with another. A particular case in point was the substitution of regional *sovnarkhozes* for the industrial ministries in 1957. The reversal of Khrushchev's reform by Kosygin testifies to its insignificance. Merely changing the line of command did not change the basic nature of the command economy, nor correct its deficiencies. Kosygin's other proposals, in contrast, call upon an entirely different principle, the principle of

¹¹ Reported in *Voprosy Ekonomiki*, No. 9, 1964, pp. 81-82; italics by the writer.

¹² Deputy chairman of the state committee on labor and wages.

¹³ *Voprosy Ekonomiki*, No. 10, 1965, pp. 14-31.

voluntary choice and market trading, to govern activities that were formerly planned.

As a liberal, decentralizing proposal, the newest Soviet scheme is neither the first nor the most radical in the European Communist countries. It is less liberal than the Czech proposals of 1964 and pales in significance when compared with the conscious and comprehensive attempt of the Yugoslavs to use market trading and decentralized controls. Indeed, the timidity of the latest Soviet reform surprised many Western observers, who had been led to believe by the fairly radical Soviet academic discussion that a dramatic step toward market socialism would be taken. The step that actually was taken is an attempt to have both systems, to season central planning with pinches of marketing and profiteering. The direction of the reform is significant, but its scope is not as yet.

Specifically, Kosygin proposed:

(1) A percentage charge on invested capital to be paid by enterprises; that is, an interest rate.

(2) A reduction in the number of obligatory targets for the enterprises; the 3 dozen or so old targets are to be replaced by eight or nine. Of these, the controlling ones seem to be the plan for output of the main commodities, the overall wage fund, total value of sales, and profit. The latter two replace the targets for cost reduction and for the ill-famed gross value of output as determinants of the bonuses for managers. The incentives and freedom of action of enterprises are to be reinforced by leaving more of the profit in specially created enterprise funds for bonuses, cultural expenditures, and investment.

Direct contracting with retail outlets or other customers was mentioned only briefly by Kosygin. The Government had already announced at the beginning of the year, however, that the experiment in direct contracting being conducted in a few pilot plants would be extended to some 400 plants in light industry.

The timing, pace, and scope of the reform were left vague in Kosygin's speech, and implementation has been cautious. A statute of October 20, 1965, on the rights of industrial enterprises allowed managers more freedom of action particularly as regards staffing patterns and wage rates. A series of methodological instructions issued in February and March 1966 spelled out the timing and method for transferring enterprises to the new system and rules for payment of bonuses to workers and management personnel and for establishment and use of the enterprise investment fund. According to the current schedule, the transfer of all industrial enterprises to the new system is to be completed in 1968. These actions remove any doubt as to the seriousness of the regime's intentions about the reform.

The theme of these reforms, faint but consistent, is market socialism. But along with the new, Kosygin valiantly affirmed the old. He defended the planning of production and denounced "the uncontrolled mechanism of the market." Although profits, interest, and a bit of marketing are included in the reforms, the output of principal products of the enterprise will still be planned. This unequivocal ambivalence probably wipes out any hope of success for this round of reforms.

Economic institutions are like teeth. If the old teeth get worn, loose, and decayed, they can be replaced by a shiny, new functional set. But

the new ones can't go in until the old ones come out. Similarly, two different institutions cannot perform the same function at the same time, and enterprises cannot simultaneously produce the mix of output that the market wants and the one that planners want.

In the concrete reality of the Soviet system, the salutary, or even cosmetic, effect of a patina of market trading is unlikely to be realized. To be beneficial, markets require flexible prices, an overall reduction of excess demand, and alternative sources of supply. The regime is carrying out a reform of prices to reflect cost of production, but they are not to be flexible nor will they reflect the influence of demand. Likewise, there is no indication that the party leaders contemplate reducing consumer purchasing power and investment plans.

The economic effect of the reforms can be forecast in advance. Because the reforms are so circumscribed, their net effect cannot be large, either for good or for bad, but their nature is such that there are likely to be both kinds of effects. On the one hand, the positive incentives may lead to improved efficiency at some enterprises, and direct contracting may result in smaller stocks of unsold consumer goods and to that extent greater consumer satisfaction. On the other hand, the same incentives if they begin to be effective may lead to output mixes counter to the plan, reshuffling of supplies as between enterprises, refusal to accept unwanted equipment, layoffs of workers, and unemployed capacity. Some enterprises may make unexpectedly large profits and others unexpected losses. None of these latter effects would be welcome to the party and the bureaucracy. In the wasteland of Soviet management, any effective incentives to efficiency would produce widespread and pervasive shifting of resources, distribution channels, and output mixes, with considerable shortrun dislocations. It can be assumed that bureaucratic interference to counteract these symptoms will appear almost as soon as the symptoms.

In short, the new system cannot operate as long as the old is on the job in full strength. The new ministries occupy a key position, and the other bureaus of planning, supply and allocation at national and republican levels still exist, with jobs, tradition, and a way of life to defend. An example of this conservatism was reported last year. A consignment of goods shipped by the Mayak garment firm to fulfill a direct contract with a particular customer was intercepted by the wholesale trade organization and sent to a different retail outlet.

The conclusion of this argument is that this round of reforms will not accelerate growth, and that neither the leadership, the people, nor the intellectual elite will be satisfied by the results. The important question is, what will they do then?

IV. PROSPECTS: EVOLUTION OR REVOLUTION?

The history of the Soviet economy since the death of Stalin has been one of recurring reforms and reorganizations. Kosygin's reform is not likely to be the last one. The basic deficiencies of central planning have not been touched, and the dissatisfaction of the intellectuals is deep rooted. One prognosis put forward by a number of Western observers is an evolutionary development toward market socialism. This view argues that the current cautious reforms will be followed by others going farther in the same direction. Thus, as tensions arise

between the new system and the old, the leadership will progressively increase the flexibility of the plan, of prices, and of the freedom of the enterprise until at last the plan disappears and markets take over.

There is much to be said against this view. It is difficult to picture the party and the planners presiding over the dissolution of planning. Second, a market system is a tricky thing to manage, even when the leadership believes in it. Such a leadership necessarily would have to put up with a great deal of messiness. The difficulties that the Russians observe in Yugoslavia must give them pause—price instability, inflation followed by spasms of price reform and devaluation, monopoly profits in some areas and heavy subsidies in others, and investments wasted on ice cream parlors and football fields. The so-called “chaos of the market,” which Soviet writers all seem to fear, is well exemplified there. And finally, neither the economic bureaucracy nor the local party apparatus is likely to accede gracefully to its own withering away.

Evolution toward an intermediate position that would still preserve the essentials of planning also is conceivable. For example, a variation on market socialism was described in 1937 by Oscar Lange in his essay “On the Economic Theory of Socialism” and has been revived in recent Western discussion. Instead of allowing prices to guide production, the planners might vary prices to equate demand to the planned production mix. Excise taxes and subsidies would help keep enterprise profits to a reasonable norm. Or, alternatively, if short-run equilibrium prices were thought to be too fidgety, long-run “rational” prices could be calculated by computers. A few tentative comments on the realism of these suggestions may be hazarded:

1. People rational enough to apply the rules of Western equilibrium analysis so methodically might also begin to question the rationality of planning a product mix in detail.

2. The notion of bureaucrats accepting the criterion of economic efficiency at the expense of “right” results, “fair” prices, or “justice” postulates a species of the genus homo not yet created.

3. Any suggestion that sensible prices can be introduced into a country where apartment rents are one-third of cost and bread is priced cheap enough to feed to pigs is breathtaking.

Despite these doubts about gradual evolution, I am inclined to believe that liberal reform in the U.S.S.R. (and in the Eastern European Communist countries as well) is past the point of no return. The economic performance of the present system presents the leaders with a choice of some kind of drastic reform of the system or of falling farther and farther behind Western Europe in productivity and standard of living. Agriculture illustrates the precarious nature of the present course of gradualism and temporizing. The newly announced five-year plan projects a doubling of investment in agriculture in 1966–70, as compared with 1961–65. This follows on the heels of a 57-percent increase in the period 1961–65.¹⁴ The planned gain in output is 25 percent,¹⁵ but the actual gain may be nearer to the 12-percent gain of the past 5 years.¹⁶ A sector as large as agriculture where investment is

¹⁴ As compared to 1956–60.

¹⁵ Average annual 1966–70 over average annual 1961–65.

¹⁶ Average annual 1961–65 over average annual 1956–60.

growing at 14 percent a year, and output is increasing only at 3 to 4 percent a year can contribute little to the goal of achieving pure communism by 1980. Investment in agriculture will be growing rapidly as a share of total investment, which is planned to grow at only 8½ percent a year, and of national income, which is to grow at 7 percent a year. Thus the most rapidly growing investment allocation is being poured into a sector where investment brings the smallest returns.

The argument that future reforms will be liberal in inspiration rests on the fact that no other kind of reform proposals now have any status. A powerful conservative opposition still exists, but it has nothing to offer but tinkering with the present system. Whenever the government has economic difficulties and seeks expert advice, the advice will be to liberalize further.

If, as argued above, evolutionary reform away from a command economy to its only known alternative, a market economy, is unlikely, then Soviet history provides us with another possible road to reform. The only significant changes achieved in the Soviet period, and I do not count Khrushchev's or Kosygin's economic reforms as significant, were revolutionary changes—war communism, the NEP, the first five-year plan, and collectivization of agriculture. They were radical and even violent responses to crises. And thus they were in accord with a cardinal point of Marxist ideology that the old must be swept away to make way for the new.

Indeed, all of Soviet history has been merely a history of crises, as others have pointed out. The only two significant changes in other Communist countries were also sweeping, spasmodic, and sudden—the dismantling of the collective farms in Poland and the decentralization of control over industry in Yugoslavia. It is no coincidence that both these steps were taken at a time of political crisis. As a result of its expulsion from the Soviet bloc 2 years before, Yugoslavia in 1950 was in a state of growing uncertainty over the future. In Poland, in 1956, de-Stalinization and the Poznan riots had uncovered the weakness of the regime. Real change was possible in these comparatively fluid situations. Even so, the measures taken were limited in scope, and the subsequent restoration of political and social stability postponed further change.

The cautious moves toward economic reform that were made in Eastern Europe out of concern over a slowdown in economic growth had little effect. The programs undertaken in Poland and Czechoslovakia after the slowdown in the mid-1950's simply petered out, leaving the impression that they had done more harm than good, and little of either. The "new economic model" of Czechoslovakia, the most widely publicized of the current programs, is typical of the reform movement in Eastern Europe. The operating autonomy extended to enterprises in principle in the "new economic model" is largely illusory, inasmuch as the state has retained direct control either in law or in fact over most enterprise decisions. Although there is much talk about the "market mechanism," it is evident that both state and party retain—and value—the right to intervene at will in all economic decisions.

In the U.S.S.R. the state of approved thinking currently is that the market is to help fulfill the plan, not to replace the plan. In the next

round of discussion, or the round after that, the weight of opinion may shift to the latter alternative. When Soviet economists arrive at this conclusion, they will still be behind their confreres in Eastern Europe. Several of these in recent private discussions with Western economists have brushed off the current reforms in Eastern Europe and have said simply, "the plan must go."

Whether economic conditions will become so critical in the U.S.S.R. as to lead the party, or a faction of the party, or a nonparty group, to dismantle the economic administration is hazardous to predict. If growth rates and performance continue more or less as at present, the leadership may muddle along with the present system for some time to come. But if growth rates continue to decelerate, the pressure for further reform will build up again. The contention of this paper is that the evolutionary approach will not work any significant improvement in the Soviet system, that reforms must radically sweep out old institutions before new ones can be built.

Reforms need not be economywide. They might touch some sectors and not others, as the NEP and the Yugoslav reform did. The most needy, and at the same time most unlikely, candidate for sweeping reform is agriculture. Here the ideological barriers and the party guilt complex are the strongest, but here the need also is the greatest. Yet no reform short of decollectivization and a substantial return to private agriculture offers much hope of improvement.

The Soviet leaders are placing their hopes on gradualism. The prognosis of this paper is that it will fail. The text for this prognosis comes from Oscar Lange. Near the end of his classic paper, "On the Economic Theory of Socialism," he considered whether it would be better to make the transition from capitalism to market socialism gradually, step by step, or all at once. He concluded that a sweeping, once-and-for-all change was preferable; otherwise, the vested interests of the system would sabotage the change. This argument applies as well to a centrally administered economy as to a capitalist economy.

INSTITUTIONAL STAGNATION AND CHANGING
ECONOMIC STRATEGY IN THE SOVIET UNION

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INSTITUTIONAL STAGNATION AND CHANGING ECONOMIC STRATEGY IN THE SOVIET UNION

SUMMARY

Pressure for economic change, fed by persistent disappointment with the performance of industry and agriculture, was the dominant characteristic of the 7-year plan covering the period 1959-65 in the Soviet Union. This period of economic disarray may in general terms be likened to that of the U.S. depression period (1929-40). Both were attended by considerable dissatisfaction with the economic order, by serious misgivings in regard to the efficacy of the existing system, and by a rather urgent quest for a new approach, new economic theories, concepts, and institutions.

The old pattern of economic development established under Joseph Stalin during the pre-World War II period was marked by an internal consistency among the political objectives of economic policy, the national economic plans, and the institutional means for implementing the plans. This consistency began to break down after the war under the impact of a number of basic factors: The proliferation of resource claimants stemming from changing political objectives; the growing size and complexity of the Soviet economy coupled with increasing relative scarcity of resources; and erosion of the effectiveness of the institutions developed to implement the economic plans, especially the economic control systems.

During the last few years of the Khrushchev period the need for change began to be openly recognized, and a search for a new economic pattern to replace that of Stalin's era was initiated and encouraged. Despite the undertaking of numerous reorganizations and administrative changes, however, no concrete measures were introduced to effect the type of fundamental institutional change that appears to be required by the changed political and economic context of Soviet economic development, in particular, measures to strengthen flexible fiscal and monetary controls. Under the Brezhnev-Kosygin leadership the search for a new pattern of economic planning and management has acquired even more urgent overtones, but the approach toward the implementation of change continues to be cautious and equivocal.

A radically new factor in the equation of change in the U.S.S.R. is the emergence of a new school of nonconformist economists who are inclined to offer rather drastic solutions and in doing this constantly tend to overstep the boundaries of the narrow sphere of responsibility to which all of Soviet science has traditionally been confined. Needless to say, the ferment in the economic sphere is not an isolated phenomenon, as a similar impulse toward change may be observed in other fields of science as well as in the cultural life of the country as a whole.

The growing number and increasing requirements of claimants on resources have generated concern over the rate of economic expansion. This concern has been heightened in the wake of the protracted slowdown in the rate of growth, a slowdown which appears likely to persist. Despite this, the latest economic plan, adopted for the period 1966-70 by the 23d Party Congress in April 1966, did not come to grips in realistic terms with the problem of combating institutional stagnation in order to stimulate economic expansion. In time, however, the Soviet leadership must logically come to the judgment that a durable acceleration in the growth rate does require substantial institutional change, including a change in the role of the party in the Soviet economy. The possibility of unpredictable political ramifications of such change are undoubtedly a major factor in the regime's apparent reluctance at this juncture to adopt more effective economic measures designed to reform the institutional framework of the economic order.

CHAPTER 1. A NEW SOVIET ECONOMIC STRATEGY

ECONOMIC SLOWDOWN IN THE 7-YEAR PLAN

The 23d Congress of the Communist Party of the Soviet Union in April 1966, like the plenary meeting of the party's central committee held in September 1965, provided yet another forum for taking stock of the Soviet economy and for expressing dissatisfaction with its recent performance and with the institutional arrangements on which it rests. These are but the latest in a series of events marking a renaissance in the science and profession of economics in the Soviet Union. Under Stalin, economics had been long dormant and sterile; it now appears to be reemerging as a vital force in Soviet society. The forces working toward this end, as well as those resisting the change, are the focus of this paper.

The 7-year plan came in full of promise at the end of 1958 and has ended with a harvest of economic problems in 1965. On the eve of the 7-year plan in 1958, the Soviet leaders could look back on a decade of substantial economic growth adequate to meet their burgeoning space requirements and growing nuclear military capacity as well as the more conventional traditional military requirements.¹ Likewise the investment programs for expanding Soviet industry were moving along with effectiveness, and consumption levels were showing signs of being augmented at a rate comparable to that of the expanding economy.² In agriculture 1958 was an excellent year with all regions, including the new lands in central Asia, bringing in good harvests; the Soviet leaders were thus inclined to set higher targets for improving the quality of food consumption by increments in meat, eggs, dairy products, and the like. Even Soviet housing was to receive a substantial impetus and by 1970 the Soviet citizen was to expect to receive housing comparable to that of his West European counterpart—approximating the sanitary norm of about 9 square meters per person—which meant nearly a doubling of the floor space

¹ John P. Hardt, in U.S. Congress, Joint Economic Committee, "Dimensions of Soviet Economic Power," Government Printing Office, 1962, pp. 5-31 (hereafter cited as "Dimensions"). See also the contribution by the same author in U.S. Congress, Joint Economic Committee, "Comparisons of the United States and Soviet Economies," Government Printing Office, 1959, pt. I, pp. 121-141 (hereafter cited as "Comparisons").

² Stanley H. Cohn, in this compendium.

previously available to the Soviet urban dweller. Thus the demands of proliferating claimants on resources and the growing need for modernizing the increasingly interdependent economy could be met within the existing institutional framework.

To be sure there were recognized problems, and to meet them, structural changes in the Soviet economy were planned in industry, transportation, and agriculture. Modernization of industry took the form of a basic conversion from the coal energy base to the more efficient petroleum-natural gas and from the ordinary carbon-steel base to high-quality steels and nonferrous metals. Transportation was scheduled to go through a revolution in motive power from a dominance of coal burning/steam locomotion to a dominance of electric and diesel motive power. The symbol as well as a fundamental aspect of this transportation program was the electrification of the Moscow-to-Irkutsk rail line. Agriculture, too, was to receive more investment in order to improve the productivity of the land under cultivation through more irrigation and higher capital intensity.

The apparent buoyancy of the Soviet economy in the fifties and the feeling of satisfaction displayed by the political leaders is apparently being reexamined in the light of their changing understanding of economic success indicators. Needless to say the problem of efficiency in resource allocation simply did not arise in the atmosphere of the late forties when, to cite one example, the principle of maximum output at minimal outlays was condemned as irrelevant and "unhistorical."³ In the Stalin era and the immediate post-Stalin period the economy was performing successfully as judged by a simple set of often unrelated criteria; for example, growth of gross output in physical units, unflinching and accurate responses to commands from above, or introduction of new technology on a limited scale. Feedbacks which in a different system would signal maladjustments and disequilibria were minimized. In a system relying on planning of production and distribution in physical units, the best indicator of surpluses and deficits—a price system reflecting supply-demand relationships—was not operating. With perennial shortages of almost everything, a sellers' market prevailed, creating a misleading impression of smooth operation of the distribution system. Moreover, the absence of interest charges effectively suppressed evidence of misallocation of capital funds.

A factor contributing to the Soviet inability to assess rationally the performance of the system was a paucity of general economic information; practically no economic statistics appeared in the public domain from the mid-thirties through the mid-fifties. We now have ample evidence that even highly placed Soviet economists and statisticians had very limited access to statistical data and that, furthermore, even the data available to top leadership was deficient in both quality and quantity.⁴

³ P. A. Mstislavskii, in *Voprosy Ekonomiki*, No. 7, 1949, p. 132.

⁴ Practically all publication of statistics stopped in the U.S.S.R. in the late thirties, not to be resumed until 1957 when the first very thin statistical yearbook appeared. The scope and volume of published statistics have been gradually improving since then, but the Soviet economic profession is still very critical of the "meager diet" of available information. (V. S. Nemchinov, "Ekonomiko-matematicheskie metody i modeli," Moscow, 1962, p. 5.) In another recent instance, unique in Soviet history, a well-known economist, A. Birman, responded to Premier Kosygin's criticism of the Soviet economic profession by pointing out that economists have had to work with inadequate economic data and in an environment not conducive to free inquiry and discussion. ("Novyi Mir," No. 12, 1965, p. 211.)

Growing recognition of the urgent need for reforms in the last few years has thus been fed by two mutually reinforcing trends. Objective economic factors such as the proliferation of priority claimants on resources and the growing interdependence of a maturing economy were leading to increasing relative insufficiency in the system. And in addition, hidden inefficiencies and shortcomings of the system were emerging in sharper and sharper focus because of the increasing sophistication of the economic and planning professions and the expanding flow of economic information.

Thus in 1958, on the eve of the just completed 7-year plan, problems in the Soviet economy were obscured by the euphoria of apparent success and by lack of accurate information within the Soviet system. In a sense, 1958 in the Soviet Union may be likened to 1928 in the United States in that there was in both instances a mood of unjustified optimism and expectations of continued economic success within the old institutional arrangements. American views in 1928 were overoptimistic in respect to maintaining high levels of production and employment, whereas the Soviet political leadership in 1958 appeared to have similar false hopes for continued high level growth. It was apparently felt that a high rate of growth could be maintained despite all of the burgeoning requirements and would still permit substantial structural changes in the economy, which would in turn lead to still more impressive growth rates in the future. Such was not the case. Instead, the Soviet economic growth rate fell to little more than half its previous level.⁵ To be sure, there were mitigating factors in the slowdown, some of which were, however, predictable. Agriculture was beset by a number of poor weather years; a decline in male manpower increments to the labor force led to a tightening constraint on a resource once considered abundant. Likewise, the international environment became more tense and in 1961 the Soviet regime decided to substantially and quickly increase its military budget, largely at the expense of civilian investment.⁶

However, there emerged during the course of the 7-year plan period more basic problems that tended to retard Soviet economic growth in both industry and agriculture. In the annual plans of the early sixties, continuing old and new economic problems were evident to the decisionmakers; some of these problems appeared too basic or too substantive to be resolved by changes in the pattern of resource allocations, by correction of nonrepetitive shortcomings, or by administrative reshuffling. Although some amelioration could come about through a shift of resources from defense to industrial investment or to consumption, through some lessening of the labor constraint as demographic trends improved, and through some improvement in efficiency achieved by administrative reorganization or reform, such partial measures appeared to leave many problems unresolved. These persistent problems strike at the institutional core of the Stalinist economic pattern of physical unit planning, collective agriculture, labor-management arrangements, and crude methods of control.

⁵ Cohn, *op. cit.* In fairness it should be acknowledged that many Western observers shared the overoptimistic Soviet expectations of continued high-level growth. For example, see John P. Hardt, et al., "The Cold War Economic Gap," Praeger, New York, 1961; speech by Allen Dulles, in *New York Times*, Apr. 29, 1958, p. 8.

⁶ Rush V. Greenslade and Phyllis Wallace, in "Dimensions," pp. 115-136; Martin J. Kohn, in "Dimensions," pp. 211-232.

ANALOGY WITH KEYNESIAN NEW ECONOMICS

On the American economic scene it is popular to refer to the final acceptance of Keynesian theories as adoption of a new economics. With the economic ferment now going on in the Soviet Union, it is not unreasonable to look for possible comparisons between the current Soviet scene and the U.S. experience of the thirties. Caution must be exercised, however, in drawing such an analogy. For one thing, the recent Soviet slowdown is not as catastrophic as was the downturn in the U.S. economy during the great depression. Furthermore, there is certainly no correlation between the political views of economists in a planned and politically centralized society such as the Soviet and the views of economists in a consumer-oriented democratic society such as ours.

Indeed it should be clearly noted that any such analogy breaks down completely in the specifics of comparison. Both the structural difficulties and their manifestations in the U.S. economy of the thirties and in the Soviet economy of today are quite different. The U.S. economy suffered from deficiency in aggregate demand which resulted in falling incomes, reduced output, and unemployment of human and capital resources. Most of the difficulties the Soviet economy is experiencing today are related to the supply side, as the giant over-controlled production machine is becoming more and more sluggish and subject to increasing tensions caused by the lack of internal consistency. However, while the manifested malfunctionings are quite different, the inability of either system to cope with the problem is rather similar and appears to be traceable to a lack of understanding of macrophenomena.

The situation in the Soviet Union by the end of 1965 could be likened to that of the United States in the middle thirties. Although of different magnitudes, the economic downturn in each country had persisted sufficiently long and shown sufficient resistance against temporization and partial measures to suggest that something more basic was wrong in the institutional arrangements of the economy or in the system as applied to the economic problems of the time. By the mid-thirties Keynesian economics was receiving increased attention in the United States. J. M. Keynes' major book, "The General Theory of Employment, Interest, and Money," was published in 1936 and by the end of the decade was influential in the thinking of those looking for a new approach to meet the basic American problem of persistent high-level unemployment which accompanied our reduced levels of production. Concomitantly, Prof. Alvin Hansen in the United States was propounding his thesis of secular stagnation to an attentive audience.⁷

Obviously, no direct parallel on specific points can be drawn between the present Soviet scene and either the Keynesian general macro-economic propositions or Hansen's secular stagnation thesis. At the same time, a general analogy can be seen in the rise of a pervasive challenge to the basic premises underlying the respective economic systems, their general theories and tools of implementation, as well as their success indicators. In each case the basic problems of the econ-

⁷ Alvin H. Hansen, "Full Recovery or Stagnation?" Norton, New York, 1938.

omy appeared to require a new macroeconomic approach, while institutional stagnation and intellectual conservatism were inhibiting the application of such an approach. Each case is also characterized by an uneasy realization that the Nation's economic potential was far from being realized, and by sense of urgency in the search for a solution.

Although there have been challenges to the viability of the Soviet planned system itself, as there were to the free enterprise system in the United States during the depression, these critiques have not dominated.⁸ In the Soviet Union and the United States alike, the dominant alternative views have been directed primarily toward modification of the existing system rather than toward replacement of any of its basic elements. To carry the analogy further, in the Soviet Union today there may be identified three main strands of thought on solutions to current economic problems, which show some rough similarity to views held in the United States during the great depression. The proponents of these points of view may be characterized as the following: those who cling to orthodoxy and who have been saying in effect that the current problems can be met in the main by returning to the successful Stalinist methods of the past—the Soviet version of the neo-classical economists in the United States of the 1930's and 1940's; those who advocate very basic changes in the theory and practice of planning—the proponents of a new economics; and those who accept the need for changes but choose to equivocate on how soon and how far reaching—the improvisers.

The orthodox traditionalists in the Communist Party and the economic bureaucracy appear to maintain that a return to the old Stalinist pattern, with some updating, is all that is required.⁷ Economists K. V. Ostrovitianov and M. Z. Bor, for example, appear to argue in effect that the best approach is to leave alone or return to the economic system developed under Stalin which had been so successful in the past.⁹ Their arguments suggest that the problems of recent years have resulted from short-term adjustments and that in the absence of tinkering by political leaders, as characterized by Khrushchev's economic campaigns, the economy of the Soviet Union could right itself and return to its previous path of high-level growth and to satisfaction of the number of priority economic claimants which state policy now requires.¹⁰

The Soviet orthodox approach, much as its Western neoclassical counterpart, can be characterized as basically microeconomic in that

⁸ In the great depression and the post-World War II period when a postwar depression was expected, for example, there were those who questioned the essential elements of the U.S. system, e.g., Paul Sweezy in the United States and Eugene Varga in the U.S.S.R. On the other hand, Von Mises, Von Hayek, and George Hahn questioned the ability of the Soviet system of planning to function or survive. That it did survive may be considered a partial repudiation of their views. S. Harris (ed.), "New Economics," New York, Knopf, 1948, p. 107; E. S. Varga, "Osnovnye voprosy ekonomiki i politiki imperializma," Moscow, 1953.

⁹ It is often difficult to identify positively the advocates of the orthodox economics. However, K. V. Ostrovitianov, a venerable Academician and economic theorist, and M. Z. Bor, a long-time planning functionary, are typical representatives of the old guard. They have repeatedly objected to all suggestions for basic change and have consistently minimized or denied the past and present shortcomings of the Soviet economic system. (See K. V. Ostrovitianov, "Stroitel'stvo kommunizma i tovarno-denezhnye otnosheniia," Moscow, 1962, or his attack on Pantorovich in *Ekonomicheskaja Gazeta*, No. 10, Mar. 10, 1965, pp. 9-10; M. Z. Bor, "Otsenki po metodologii i metodike planirovaniia," Moscow, 1964.)

¹⁰ Another group of orthodox economists, such as A. Ia. Bolarskil, have accepted the new mathematical techniques and econometric tools but not the basic postulates of the Soviet new economics. (See A. Ia. Bolarskil, in "Problemy optimal'nogo planirovaniia, proektirovaniia i upravleniia proizvodstvom," Moscow, 1963, pp. 16-32.)

its main focus is on the supply and output plans for the priority heavy industrial sectors. Soviet planning today is essentially concerned with ad hoc detailed instructions to individual economic units, the largest of which is a ministry or a sovnarkhoz. The gross output of each industry or enterprise is planned by extrapolation from some base period, often by applying arbitrary rates of growth. As has frequently been pointed out in the Soviet literature, very little attention is paid to inter-industry relations, with resultant inconsistencies in projected output levels.

But lack of macroeconomic consistency in planning is even more glaring. There is a growing body of testimony by Soviet economists and planning functionaries pointing to a malfunctioning if not a complete absence of overall or macro planning. As Soviet critics become more and more frank in their discussion of the system, it is becoming apparent that separate parts of the State plan—such as the plan for capital construction, the plan for installation of productive capacity, the plan for introduction of new technology, the financial plan—are not correlated with each other and are often inconsistent. The evidence of inconsistencies and lack of correlation among different plan measures comes from a wide range of economists and planners. Academician V. S. Nemchinov, the most outspoken critic of the present planning system, has described the situation as follows: ¹¹

The different parts of the state plan are not tied together. There is a *permanent* hiatus between the production and supply plans, between measures of output, utilization and effectiveness, of capacity, and introduction of new technology. The consistency of the production, labor, financial, and supply plans also leaves much to be desired. * * * The reason lies in the mechanism of planning, which is such that the different parts of the plan are drawn up by different experts. [Emphasis added.]

Moreover, the apparent use of some macroeconomic measure does not stand the test of detailed scrutiny. Most of the synthetic indexes (to use a Soviet term), such as rates of growth of national income and gross social product, increases in labor productivity, decreases in material cost, and others used for the entire economy, are actually weighted averages projected for individual units. Perhaps the best illustration is the well known division of gross social product into group I (producer goods) and group II (consumer goods) suggested by Marx and used in his theories of economic growth and allocation of resources. Despite the theoretical importance attached to this division, Soviet planners and statisticians have never, to our knowledge, calculated or estimated the relative magnitudes of the two groups *ex post* or tried to project them *ex ante*. A substitute version of the division into groups A and B for industrial product has been used but,

¹¹ V. S. Nemchinov, "Odal'neishem sovershentvovani! planirovaniia i upravleniia narodnym khoziaistvom," Moscow, 1965, pp. 6 and 56. Iu. I. Cherniakov, Nemchinov's former student and a specialist in input-output analysis, supplies some startling evidence: the Institute of Mathematical Economics of the Academy of Sciences examined more than 1,000 plans of individual enterprises and discovered that in not one single case did the supply plan agree with the financial plan. For some measures the discrepancies were as high as 50-100 percent. (Iu. I. Cherniakov, in "Primeneniie matematiki v ekonomicheskikh issledovaniakh," edited by V. S. Nemchinov, vol. III, Moscow, 1965, p. 273. See also S. A. Pervushin, in *Ekonomicheskaiia Gazeta*, No. 10, March 1966, p. 26.) Addressing the 23d Party Congress, N. Baibakov, the chairman of Gosplan, frankly admitted "major shortcomings in the plans, resulting from insufficient agreement among output targets, construction schedules, and material supply plans." And in the true spirit of a Soviet bureaucrat, he promised to remedy the situation by setting up in the Gosplan apparatus "additional subsections whose task would be to ensure a balance between production plans and distribution plans. * * *" (*Izvestiia*, Apr. 8, 1966.)

again, it is calculated on the basis of individual output levels. The same is true of other measures which, one would feel, should be the starting points in economy-wide planning—the ratio of investment and consumption, regional development patterns, the share of value added in the gross social product, the fuel-electrical power ratio in the energy mix, the foreign trade balance, and the like. The low priority assigned to the consumption component of net product throughout the Soviet period is well known and documented, but only recently did we learn that Soviet planners have not employed a measure of overall standard of living or welfare in the national plan.¹²

The main thrust of the economists who persist in the old methods is that of improving somewhat on the data collected and using electronic computers to more quickly process and manipulate the data. They do not, however, suggest a substitution of macroeconomic data reporting derived from improved fiscal and monetary control measures.

The Soviet counterparts of our Keynesians could be Academicians V. S. Nemchinov and L. V. Kantorovich, and Prof. V. V. Novozhilov.¹³ These economists appear to be suggesting that the old ways of doing things and the old doctrines and economic theories underlying them need a thorough overhaul. No longer can the requirements for economic growth and economic efficiency be met by the old balanced-estimates methods of central planning, using physical output measures of performance and with political leadership making detailed economic decisions and monitoring in detail the implementation of the economic plan. In their view, there must be a basic shift to some form of flexible pricing in planning. Implicit in this is the need for a new generation of economists who would take on some of the responsibilities for making detailed economic decisions consistent with the guidance of the political leadership and who would establish criteria of performance based upon their economic analysis. Reliance on such flexible and indirect tools of analysis and control as credit, taxes, interest, monetary incentives, and economically meaningful prices would put this new Soviet economics in a category analogous to the macroeconomic Keynesian-Hansen views on the need for flexible fiscal and monetary policy in the depression-ridden United States of the thirties.

The appearance of Stalin's book, "Economic Problems of Socialism in the U.S.S.R.," in 1952 and an officially-promoted discussion of a

¹² One author describes the situation as follows: Soviet economists still disagree on what constitutes an optimal ratio of consumption to investment. Planning was affected without consideration of population consumption. For the first time, in 1964, the state plan incorporated a measure of an overall standard of living. (N. Buzliakov, in *Ekonomicheskaja Gazeta*, No. 51, December 1965, p. 22.)

¹³ These three men should be credited with providing the theoretical foundation, meaningful direction, and actual guidance to the new school in Soviet economics. While differing in the originality and depth of their theoretical contributions, they are alike in applying sophisticated mathematical techniques to economic analysis, in unequivocal condemnation of the shallowness of Soviet economic science, and in concentration on the inefficiency syndrome of Soviet economic performance. Of the three, Kantorovich (a mathematician by training) is probably the most original thinker. In 1939 he formulated what later came to be known as linear programming and worked out a general solution. The scientific environment in the Soviet Union at that time was less than receptive and his theoretics were completely neglected. In 1947, an American, George Dantzig, independently developed linear programming, and the supervisors of science in the U.S.S.R. belatedly rediscovered Kantorovich's original contributions. Nemchinov's contributions range over a host of areas of theoretical economics, and most important of all, to him belongs the major credit for the skillful political maneuvering that has led to the regime's acceptance of mathematical techniques in economic analysis. Novozhilov, who has published several highly unorthodox papers related to problems of the effectiveness of investment and price formation, seems to have taken over as leader of the new school since Nemchinov's death in 1964.

textbook on political economy in the early fifties marked the beginning of an ever-widening debate on planning in the U.S.S.R. This debate started with inquires into isolated problems such as differential land rent, obsolescence, correct rates of depreciation, problems of reduction of labor cost, the effectiveness of capital investment, or problems of price formation. As the discussion began gradually to encompass wider and wider areas of Soviet economic life it also started to crystallize. The oldtimers of the economic and planning professions continued to spend endless hours listening to detailed reports of anomalies in the prices of oil products or depreciation rates in the cement industry. However, the young mathematically oriented economists, grouping around such luminaries as Nemchinov, Kantorovich, and Novozhilov, gradually abandoned such partial analysis in their quest for measures of the overall economic effectiveness of the system. Over bitter opposition from the more dogmatic economists, the new school established, at least in principle, the need for identification of national optimality criteria and for assessing the overall impact of specific economic policies.

Moreover, the Soviet econometricians, such as A. G. Aganbegian, I. Ia. Birman, and V. D. Belkin, appear to agree with the econometric view of the Keynesian New Economics as expressed by Jan Tinbergen in the following:¹⁴

* * * there is a good deal of agreement between the contributions made by Lord Keynes and those made by the econometricians, which reinforces some of the conclusions to which those contributions have led us. Among the general characteristics of Keynes' important work is before all the use of *macro-economic concepts*.

The Soviet econometricians (or as they prefer—planimetricians) appear to be encouraged by their newly acquired status, but they may be frustrated by the continued microeconomic nature of Soviet planning, which limits their effectiveness.¹⁵

Although seemingly approving of the new economics in principle, the Kosygin leadership has apparently chosen to equivocate and improvise in practice. With the exception of abolishing the region economic councils and the industry-agriculture division in the party apparatus, both essentially administrative changes, few major completed changes have been offered by the new Soviet leadership in the year and a half of its rule.

Some experimentation with Western techniques in economic analysis is now permitted and a pale version of a market system along the lines suggested by Prof. Yevsei Liberman is being tested in several areas.¹⁶ The reforms announced at the September 1965 plenary session of the central committee do represent a potentially radical break with the past but, as will be discussed in greater detail below, these changes are more meaningful in terms of rejection of old ways rather than in terms of formulation of a coherent new system.

¹⁴ J. Tinbergen in S. Harris (ed.), *The New Economics*, New York, Knopf, 1948, pp. 219-220.

¹⁵ See a speech by A. G. Aganbegian, as reported in *Bandiera Rossa*, July 1965 (An English version, translated by JPRS, is reprinted in *The ASTE Bulletin*, vol. VII, No. 2 summer 1965).

¹⁶ Liberman's well-publicized proposal for using profit as a performance criterion is merely another in a long list of "success indicators" for enterprises and does not by itself represent a fundamental change.

Although the environment is becoming increasingly permissive, some reversion to the old patterns cannot be ruled out. There already are some signs that force of habit and the inertia of the control mechanism may be bringing about retrogressive modifications of the reforms announced in September.¹⁷ Furthermore, much acknowledged necessary action, such as the long-promised price reform, has been put off. The current Soviet scene appears to fit the description President Kennedy gave for the United States: “* * * our rhetoric has not kept pace with the speed of social and economic change.”¹⁸ The present cautious leadership seems willing to take, or unable to avoid, the risk of exposure to Lenin’s caustic critique of “one step forward, two steps back.”¹⁹

Still it should be recognized that some partial measures short of a revolutionary changeover to financial planning might result in a tolerable improvement in efficiency. For example it is, at least theoretically, possible to devise a method for deciding which requirements should be met in full and which denied, so as to minimize the disruption in production and investment caused by production bottlenecks and delays in construction. Moreover, the improvisers might argue persuasively for a gradualist approach, in view of the fact that the Soviet economy is still growing at a respectable rate—still above the long-term U.S. growth rate of about 3 percent over the last 50 years. The rate achieved by the Soviet economy in the first half of the present decade (circa 4.5 percent) is still respectable although it is a substantial slowdown from that of the 1950’s when its growth rate was roughly twice that of the U.S. economy (7 percent as compared to 3 percent per annum). At present the Soviet economy does not appear close to collapse, however defined. Nevertheless, the political leadership of the Soviet Union may find it difficult to live with a growth rate that is merely respectable.

INCONSISTENCIES IN THE PLANNING SYSTEM

The present Soviet system of guidance, control, and operation of the economy is essentially that developed by Stalin under conditions considerably different from those in the Soviet Union today.

After the resolution of the leadership struggle and the industrialization debate in the 1920’s, Stalin launched Soviet society into the first 5-year plan. The subsequent economic revolution changed not only the Soviet economy but all facets of Soviet society ranging from the content of cultural activity to the conduct of daily life. Extreme as the system was from a Western viewpoint, it did have an internal logic. The politically inspired prescriptions of a leader with a monopoly of political power—Joseph Stalin—were effectively expressed in the economic plan, and the institutions that were developed to implement these political-economic judgments were consistent with the

¹⁷ See below, pp. 50–51.

¹⁸ Commencement address at Yale University, June 11, 1962, *New York Times*, June 12, 1962.

¹⁹ After the 1903 Congress of the Russian Social Democratic Party, Lenin was scathingly critical of his opponents, accusing them of presenting a program that only gave the appearance of moving toward the revolution but in reality meant a reversal. He proposed instead a new concept of a minority group of professionals organized on the principle of “democratic centralism.” (See V. I. Lenin, “Selected Works in Two Volumes,” Foreign Languages Publishing House, Moscow, 1950, vol 1, part I, pp. 410–656.)

objectives and the state of the economy at that time. However, changes have taken place in the political prescriptions and in the structure of the Soviet economy, while the institutions have not changed sufficiently to meet the new requirements. This institutional stagnation has contributed to instabilities and inconsistencies in the Soviet economic system. The changes made under Khrushchev were largely improvisations not intended to change the basic nature of the institutions but rather to preserve them. Some of Khrushchev's innovations have undoubtedly aggravated the growing inconsistencies in the system. In their search for a new and more effective pattern of economic development, the Soviets must therefore address the central problem of institutional stagnation. And this may lead to a second economic revolution of major proportions.²⁰

These themes are developed further in the following chapters. In order to place the current ferment in Soviet economic circles in proper perspective, it may be useful to take a brief look at the basic elements of the Stalinist development pattern as it took shape in the period of the early 5-year plans.

CHAPTER II. OLD INSTITUTIONS AND NEW REQUIREMENTS

THE STALINIST PATTERN

Soviet economic literature is replete with discussions of the "objective economic laws" of the Soviet system. These "laws," however, provide no practical guidance or objective criteria for determining the proper proportions among the various sectors of the economy for balanced growth of the entire economy. The economy develops in the direction decided upon by the planners. These decisions are made in accordance with the planners' own scales of preference and are often based on political, military, or other noneconomic considerations. Until recently the goals of general economic equilibrium and balanced growth were far down on the planners' preference scale. As described by a Polish economist who was intimately acquainted with the Stalinist type of planning, the grand design of the Stalinist planning concept has in fact been one of almost deliberately sought incongruity among the sectors of the economy.²¹ The entire system—political and social as well as economic—is pointed toward the single overriding objective of rapid industrialization for the purpose of establishing a strong heavy industry base and building up military capability.

It is because of this single-minded purposefulness that the Stalinist economic model is sometimes characterized as being analogous to a "war economy." In a nation at war, normal economic considerations of cost and general efficiency give way to the requirements for attaining limited and well defined ends, i.e., military victory. Drastic measures may be instituted to channel economic effort toward this end, including such direct controls as rationing and compulsory labor assignments. Those parts of the economy that are directly and im-

²⁰ First discussed in a lecture by John P. Hardt entitled "The Second Soviet Economic Revolution," carried in the George Washington University's Institute of Sino-Soviet Studies Radio Series, Nov. 7, 1965.

²¹ Oskar Lange in O. Lange (ed.), "The Political Economy of Socialism," Warsaw, 1962, pp. 1-30.

mediately relevant to the war effort are pushed vigorously and are given priority in the allocation of resources; meanwhile the non-essential sectors of the economy are not only slighted in this regard but may even be actively despoiled. The success of such an economy is judged by its ability to produce large quantities of a relatively small number of key products, rather than by optimal satisfaction of the needs of a wide spectrum of claimants on resources.

So it has been with the Soviet industrialization drive. Those industries that provide the wherewithal for further industrial expansion—in this case, chiefly steel, coal, electric power, and machine building—were expanded at very high rates. It is these favored sectors that accounted for most of the economic growth during the Stalin era, and much of this growth was achieved by putting in more resources, particularly more labor and more raw materials (while conserving capital at the same time), rather than through more efficient use of existing resources.²² Today, some Soviet economists, especially those associated with demands for far-reaching economic reforms of the entire system, explain the present difficulties of the economy as due largely to the necessary transition from such an "extensive" pattern of development to an "intensive one" with greater emphasis on efficiency in the use of resources.²³

Successful operation of a Stalinist type of system requires a political and social milieu in which not only can the central authority force the economy to move in the desired direction but within the center itself there is no vacillation or ambiguity in respect to the principal objectives. There can be no question as to the propriety of the chosen goals, and these goals must be pursued steadfastly and relentlessly. The forced and unbalanced nature of such development produces severe strains and distortions which give rise to undesirable tendencies that may threaten the success of the program and must be stringently curbed. Such tendencies may quickly change from potential to actual as soon as there is any relaxation of pressure or equivocation and uncertainty on the part of those in control of the economy.

In the case of the U.S.S.R., Stalin was able to achieve and maintain the necessary unanimity at the top decisionmaking levels, to develop the instruments for suppressing any tendencies that may have worked against achievement of the chosen goals, and to keep the Soviet nation in singleminded pursuit of these goals. The institutional arrangements and control methods developed during the Stalin era also facilitated the task of keeping the number of priority economic objectives at a low minimum—an important feature of the Stalinist pattern.

Out of the wide ranging economic debates and intense political power struggles of the middle 1920's emerged the decision to strive for maxi-

²² Abram Bergson, in Abram Bergson and Simon Kuznets (eds.), "Economic Trends in the Soviet Union," Harvard University Press, 1963, p. 33; John P. Hardt, in "Comparisons," pt. I, pp. 124-128.

²³ This is the main thesis of a major analytical paper by V. V. Novozhilov, in "Ekonomika i matematicheskie metody," No. 5, 1965, p. 645. A leading Czech economist has summarized the situation thus: "The traditional system was adequate to the conditions of extensive development and speedy industrialization under which it originated in the Soviet Union. Given the major objectives of economic policy—dictated by the Soviet Union's international isolation and economic backwardness at that time * * * maximization of output rather than minimization of input had to become the overriding consideration." Josef Goldman, in "Economics of Planning," vol. 4, No. 2, 1964, p. 88. See also John P. Hardt, in Gregory Grossman (ed.), "Value and Plan," University of California Press, 1960, pp. 295-311.

imum economic growth and to do this by turning the underdeveloped and largely agrarian Soviet economy sharply in the direction of industrialization with special attention to heavy industry.²¹ From this decision the need for a high rate of investment follows almost axiomatically. Since for various reasons foreign sources of capital were largely precluded, and in view of the rapid pace of industrialization desired, the Stalinist leadership deemed it necessary to force the relatively poor domestic economy, often by Draconian measures, into a high rate of saving and its converse—a low rate of consumption. Since agriculture accounted for a large part of the national income and was not an integral part of the industrialization scheme, this sector was to bear the brunt of the capital formation burden. From these considerations stem the principal institutional features of the Stalinist pattern: collectivization of agriculture to enable the state to appropriate a greater proportion of agricultural output; coercive labor and management controls to reinforce the meager incentives provided by the low level of consumer goods output; centrally controlled distribution of the most important intermediate and final products; planning in terms of physical units of input and output, particularly in priority sectors or quota goods.

In its main outlines this pattern had an internal consistency, at least during the period when it was conceived. The politically determined objectives were few and were compatible with the economic strategy chosen to attain them. Given the state of technology at that time, both the primary objectives of rapid economic growth and greatly increased military capability were fostered by expansion of a relatively few key industries. Given the state of the economic planning art, the methods of planning were necessarily crude. Close central control followed logically from the drastic restraints imposed on the low-priority sectors, which were also compatible with the urgent pace of expansion desired in the high-priority sectors. The low-priority sectors also provided a "cushion" where the effects of planning mistakes and inefficiencies could be absorbed with little apparent impact on the favored sectors.

A very high rate of investment was maintained throughout the Stalin era, with the exception of the World War II period when defense expenditures accounted for a large share of the national income. From 1928 to 1955, gross investment increased at nearly twice the rate of gross national product and about three times that of personal consumption.²⁵ The bulk of this investment was directed to industry and to key sectors within industry. According to official Soviet data, fixed capital in industry and construction increased at more than four times the rate of increase in total fixed production capital in the economy during the period 1928-55. The disparity between industry and agriculture was even greater. Moreover, 90 percent and more of the industrial investment was typically allocated to producer goods industries, where the payoff in terms of preferred growth is high.²⁶

A characteristic feature of the Stalinist investment pattern is relative neglect of the economic infrastructure. This is exemplified by the

²¹ A detailed analysis of this industrialization controversy is given in Alexander Erlich, "The Soviet Industrialization Debate, 1924-28," Harvard University Press, 1960.

²⁵ Abram Bergson, "The Real National Income of Soviet Russia Since 1928," Harvard University Press, 1961, pp. 217, 237.

²⁶ TsSU, "Narodnoe khoziaistvo SSSR v 1959 godu," Moscow, 1960, pp. 66, 550-551.

policy in regard to the transportation network. The share of the transportation sector in the total volume of capital investment dropped sharply after the industrialization drive was launched and declined even further in the post-World War II period. As a result, fixed capital in transportation and communications increased at about half the rate of increase of fixed capital in the economy as a whole.²⁷ This policy was followed in the face of the rapidly growing demand for the services of this sector as the economy expanded. Although the volume of freight traffic increased greatly, this was achieved largely by more intensive utilization of existing facilities, by relatively high inputs of fuel and labor, and by maintaining low quality of service.²⁸

The lowest priorities in investment policy were assigned to the sectors pertaining largely to consumption—agriculture, consumer goods industries, consumer services, residential housing. Agriculture, which still accounted for about one-third of Soviet GNP in the early fifties,²⁹ received only 15 percent of total investment during the period 1951–55, less than half its proportion in GNP. Even so, this was a somewhat higher share than had been allocated to this sector during the previous years of the Stalin era. Investment in consumer goods industries was even lower—about half the rate of agriculture. The share of housing dropped sharply in 1928–32 as compared to the preceding period of Soviet rule and remained at a low level throughout the Stalin years.³⁰ As a result of these policies, per capita urban housing space remained well below the minimum health standard officially proclaimed in the Soviet Union,³¹ and consumption in general was severely curtailed.³² The per capita real wages of the nonagricultural labor force did not regain the low 1928 preindustrialization level until 1953–54.³³

The Stalinist principle of economic management is perhaps epitomized in the collectivization of agriculture. The methods applied in this sector were a mixture of direct physical control through appropriation of the product and indirect control through prices and taxes, with greater reliance on direct control methods. The collective farms were compelled to deliver to the state—either directly through the state procurement system or by way of payments in kind to the government-operated machine tractor stations (MTS)—the bulk of their output, and at prices that were little better than nominal. The immediate results of the collectivization drive were a severe drop in agricultural output but a substantial increase in state procurements of farm products.³⁴ The collectivized form of agriculture was apparently designed more for efficiency in collecting agricultural output for state needs than for higher yields and production efficiency.³⁵ In the latter respect it is at best indifferent and in many ways even inimical.

²⁷ A. I. Vlkent'ev, "Razvitie ekonomiki SSSR i problemy proporsional'nosti," Moscow, 1963, pp. 166–167.

²⁸ E. W. Williams, Jr., "Freight Transportation in the Soviet Union," Princeton University Press, 1962, pp. 121–129.

²⁹ Cohn, *op. cit.*

³⁰ TsSU, "Narodnoe khoziaistvo SSSR v 1961 godu," Moscow, 1962, pp. 540–541.

³¹ Janet G. Chapman, "Real Wages in Soviet Russia Since 1928," Harvard University Press, 1963, p. 26.

³² The share of household consumption plus state-furnished consumer services in GNP fell from over 80 percent in 1928 to about 60 percent in 1940 and dropped even lower in the postwar period. See Bergson, "The Real National Income of Soviet Russia Since 1928," pp. 215–258; Cohn, *op. cit.*

³³ Chapman, *op. cit.*, p. 144.

³⁴ D. Gale Johnson and Arcadius Kaban, in "Comparisons," pt. I, pp. 204–205.

³⁵ Lange, *op. cit.*, pp. 50–51, Lazar Volin, in "Comparisons," pt. I, pp. 288–294.

In addition to aiding in the collection of farm products, the MTS also provided a means for controlling the distribution of inputs to agriculture, particularly capital equipment.

Central allocation and distribution of materials and supplies was applied to industry as well as agriculture. Through this supply system the central authorities plan and allocate the bulk of producer goods and materials in considerable detail as regards suppliers, users, and amounts, generally in terms of physical units. The center issues a large number of production directives and allocation orders telling each producing unit what and how much to produce under the constraints of specified amounts and types of inputs.³⁶ The performance of the economic unit is judged by how well it complies with these directives, the principal criterion being the volume of gross output. This is a notoriously deficient indicator, and other criteria have also been added in the course of time in an effort to compensate for its shortcomings. Gross output, however, has remained the most important measure of performance, and the introduction of additional criteria has created other problems. In some cases, different criteria may even work in opposite directions with undesirable results, as when bonuses paid for cost reduction inhibit the development and introduction of new technology.³⁷

Close and minute control of the activities of producing enterprises also had its counterpart in severe restrictions on individual volition in the labor force. In the early days of the industrialization drive, Soviet labor unions, which had previously been considered guardians of the laborer's welfare, were transformed into appendages of the state whose function was to enforce discipline and promote the state's objectives. Severe restrictions on the mobility of labor were imposed. Heavy penalties were assessed against unauthorized quitting, absenteeism, tardiness, and loafing on the job. State authorities were empowered to transfer labor, particularly skilled labor, at will, and a labor draft of young people was instituted. Collectivization of agriculture tied the peasantry to the collective farms in a virtual reversion to serfdom, even to the institution of a type of *corvee*.³⁸ In industrial labor relations, some use was also made of indirect controls and incentives as well as direct administrative orders and coercion. Differential piecework rates were used extensively; premia were paid for overfulfillment of plan quotas; there was a considerable spread in the wages paid. Exhortation, moral suasion, and campaigns—such as the Stakhanovite movement³⁹—were used to spur individual effort and to supplement the physical and financial labor controls.

It would appear logical that the drastic changes brought about in the structure of production and the pattern of distribution of the national product should be accompanied by some sort of equally drastic change in the institutional fabric of the economy and the entire soci-

³⁶ A comprehensive survey of the Soviet supply system is given in Herbert S. Levine, "A Study in Economic Planning: The Soviet Industrial Supply System," unpublished Ph. D. dissertation, Harvard University, 1961.

³⁷ The problems of management incentives and "success indicators" are explored in detail in Joseph S. Berliner, "Factory and Manager in the U.S.S.R.," Harvard University Press, 1957; and David Granick, "The Red Executive," Doubleday, 1960.

³⁸ Gregory Grossman in Donald W. Treadgold (ed.), "The Development of the U.S.S.R.," University of Washington Press, 1964, pp. 46-48.

³⁹ A drive for setting records in individual piecework output quotas that was highly publicized and glamorized, with heroes and medals and prizes.

ety. The degree and pace of change desired by the Stalinist leadership could not but engender stress and strains in the existing institutional fabric and considerable resistance in various quarters of the society. Under these circumstances it is not surprising that tight central control and various forms of compulsion and duress should follow. However abhorrent be the changes actually instituted by Stalin's regime and the methods used to effect them, the Stalinist pattern of economic development did have a considerable degree of correspondence between goals, methods, and institutions.⁴⁰

Although the Stalinist system of economic and sociological institutions was apparently quite successful, in terms of achieving the chosen political-economic objectives, it has become somewhat anachronistic as objectives and requirements have changed. Institutional change has not kept pace with the great changes that have occurred in the economy since the industrialization drive was launched.

THE DEVELOPING REQUIREMENTS FOR A NEW PATTERN

The blurring of priorities

In one of his last major pronouncements, Stalin asserted that economic planning can be effective only if it satisfies the "law" of balanced development of the economy and the "basic economic law of socialism," with the latter supposed to mean "maximum satisfaction" of all the needs of society.⁴¹ He was probably indulging in the double-speak characteristic of that period of Soviet history, but it appears now that he was more prophetic than he realized. The imbalances in the Soviet economy that have grown out of long adherence to the Stalinist model are a major factor in the present problems of Soviet planning. These structural instabilities also have their counterpart in uncertainty (or at least less certainty) of objectives. Other areas of the economy have moved up on the priority scale to challenge the primacy of heavy industry, while the latter still appears to retain all of its former importance. In the meantime, the economy has grown much more intricate and complex, complicating the task of planning and making it more difficult to determine the best way of attaining the larger number of objectives. The single-minded purposefulness of the Stalin days has become diluted; the priorities are no longer as clear cut as they once were. And the so-called laws of Socialist economics provide the planners with little or no guidance. Even the once sacrosanct principle that producer goods industries must grow at a faster rate than consumer goods industries is now being questioned.⁴²

The Stalinist economic strategy of forcing a few key sectors to expand at a strenuous pace requires the existence of "cushion" sectors where planning mistakes and structural disproportions, whether inadvertent or contrived, can be absorbed. Such a cushion has pre-

⁴⁰ For an extended elaboration of the argument in this paragraph, see Alec Nove, "Economic Rationality and Soviet Politics," Praeger, 1964, pp. 17-39.

⁴¹ Joseph Stalin, "Economic Problems of Socialism in the U.S.S.R.," International Publishers, New York, 1952, pp. 33-34.

⁴² See S. P. Pervushin, in V. G. Venzher, et al., "Proizvodstvo, nakoplenie, potreblenie," Moscow, 1965, pp. 3-41; L. I. Doygan', "O tempakh rosta dveh podrazdelenii obshchestvennogo proizvodstva," Moscow, 1965; A. Bechin, in Voprosy Ekonomiki, No. 1, January 1965, pp. 41-52; S. Shatalin, in Voprosy Ekonomiki, No. 1, January 1965, pp. 22-24; A. A. Arzumaniyan, in Pravda, Feb. 24 and 25, 1964.

consumer services and welfare, and better working conditions for labor. During 1959–62, two additional areas—education and public health—came to the forefront of attention by the top policymaking organs, while most of the others retained their importance. The authors of this study conclude that “every extension of the range of economic objectives has led to a parallel extension of central control to a new sector of the economy,” and “every such extension has increased the size and complexity of the centrally managed sector and, through the square law, increased the danger of planning inconsistencies. Every such extension has at the same time reduced the cushion sector—almost to zero by the end of the period, making it more difficult to alleviate inconsistencies by controlling absorption by residual users.”⁵⁴

The resource allocation problems of Soviet planners are compounded by rising marginal costs in many areas of the economy. Some of the factors underlying this trend can be considered more or less transitory or infrequent, such as the decline in the number of new entrants to the labor force resulting from low birth rates during World War II, and below-normal agricultural harvests. Others, however, appear to be of a more durable nature.

It was noted above that much, if not all, of the Soviet Union's past superiority in rate of growth is attributable to increases in inputs—labor, capital, and natural resources—rather than to some extraordinary rise in factor productivity. The possibilities for this type of extensive growth in the future appear to be more limited, particularly in respect to labor, land, and mineral resources, and future growth may have to come largely from productivity improvements.

Although the labor supply situation has improved somewhat since the turn of the decade, increments to the labor force resulting from the natural increase in the working age population will for some time still be considerably below the rate of the early fifties.⁵⁵ Moreover, the participation rate of the Soviet working age population in gainful employment has already been pushed to a very high level, and further increases in this rate will be difficult and expensive.⁵⁶ Growth in the labor force will thus be restricted largely to natural population increase, which is still declining.⁵⁷

Almost all of the increase in Soviet agricultural output since 1928 has been achieved through expansion of the area under cultivation.⁵⁸ With the good agricultural years in the midfifties, this policy of extensive growth yielded tolerable results, but since 1958 gross agricultural output has not kept pace with the expansion of sown areas.⁵⁹ Western experts on Soviet agriculture are in agreement that the increase in land under cultivation has already reached the limits of economic feasibility, and has perhaps even gone beyond.⁶⁰

⁵⁴ *Ibid.*, p. 31.

⁵⁵ U.S. Congress, Joint Economic Committee, “Current Economic Indicators for the U.S.S.R.,” U.S. Government Printing Office, 1965, pp. 23–43.

⁵⁶ See Cohn, *op. cit.* In 1959, about 70 percent of all women of working age (Soviet definition) were either gainfully employed or going to school full time. (V.G. Kostakov and P. P. Litviakov, *Balans truda*, Moscow, 1965, p. 32.) According to Premier Kosygin, this proportion has now risen to 75 percent. (*Izvestia*, Sept. 28, 1965.)

⁵⁷ Current Economic Indicators, *op. cit.*, p. 32.

⁵⁸ Johnson and Kahan, *op. cit.*, p. 217.

⁵⁹ Nancy Nimitz, in Morris Bornstein and Daniel R. Fusfeld (eds.), *The Soviet Economy*, rev. edition, Irwin, 1966, p. 204.

⁶⁰ W. A. D. Jackson, in Roy D. Laird (ed.), *Soviet Agriculture and Peasant Affairs*, University of Kansas Press, 1963, pp. 171–185; Johnson and Kahan, *op. cit.*, p. 226; U.S. Department of Agriculture, *Soviet Agriculture Today*, Foreign Agricultural Economic Report No. 13, December 1963, pp. 2–6; Roy D. Laird, in *Survey*, July 1965, pp. 106–117.

As the economy has grown, its requirements for other natural resources have also been increasing. And there is a strong tendency for costs in the extractive industries to rise as production extends to deposits poorer in content, situated under more difficult conditions for extraction, located farther away from their customers and from settled areas (requiring greater investment in housing, transportation, etc.).⁶¹ Technical progress in both production and utilization mitigates this tendency somewhat but does not eliminate it. On the other hand, technical progress also enhances this tendency in that it increases the demand for new and rare metals and other scarce minerals. The growth of nonferrous metallurgy, for example, stimulated by military-space demands and rapid expansion in the chemical industry, has compelled the Soviet Union to exploit high-cost deposits of many nonferrous ores.⁶²

Incremental capital-output ratios have been rising in recent years. This is true of all the major sectors of the economy—industry, agriculture, construction, transportation, and communications⁶³—and within the industrial sector for nearly all of the major industries.⁶⁴ An increasing proportion of investment is being diverted to replacement of capital rather than to new capital.⁶⁵ In the machine-building industry there has been a marked increase in the proportion of equipment over 20 years old, and machine building has the best equipment-age structure of any industry. In some important types of industrial equipment, over 80 percent is in the 20-and-older category.⁶⁶

The past success of the Soviet investment effort in stimulating growth was enhanced by the fact that the stock of capital taken over by the new regime in Russia was relatively young and replacement requirements were relatively low, making it possible to direct a large proportion of gross investment to the formation of new capital. This was reinforced by the rather extensive opportunities for borrowing developed techniques, processes, and equipment designs from the technologically more advanced Western countries, sparing the Soviets much of the need for expending investment funds on research and development. These factors may also have obscured and counterbalanced some of the effects of misallocations and inefficiencies resulting from poor investment planning.⁶⁷ Their growth stimulating effects have declined as the Soviet economy has become technologically more advanced and it is not very likely they will again become as significant in the future.

⁶¹ Kvasha, *op. cit.*, p. 165; T. Khachaturov, in *Voprosy Ekonomiki*, No. 2, 1966, p. 6. The expected growth in the demand for fuel and power in some of the major industrial (and fuel-short) regions of the European U.S.S.R. will require, in the near future, large amounts of investment in transportation facilities, as well as in the fuel industries themselves. (M. Mkrtechian, in *Planovoe Khoziaistvo*, No. 9, September 1965, pp. 32-33.)

⁶² S. A. Pervushin, et al., "Ekonomika tsvetnoi metallurgii SSSR," Moscow, 1964, pp. 87-88, 128-129.

⁶³ Cohn, *op. cit.*

⁶⁴ S. A. Kheinman, *op. cit.*, p. 180.

⁶⁵ Kvasha, *op. cit.*, pp. 118-121.

⁶⁶ Kheinman, *op. cit.*, pp. 211-212.

⁶⁷ An example of poor planning, cited by a Soviet economist, is the case of the Lenin Volga Hydroelectric Station built in 1955-57. Later analysis showed that the resources used in the construction of this plant would have been sufficient to build several thermal plants with an aggregate capacity of about five times that of the hydro plant. (N. G. Poleshchuk, "Osnovnye voprosy ekonomiki toplivno-energeticheskoi bazy SSSR," Moscow 1965, p. 8.) Assertions and complaints such as this may, of course, be exaggerated and ought to be discounted. If nothing else, however, they do illustrate the lack of adequate investment planning criteria.

viously been provided by agriculture and the consumer industry, and to some extent by the infrastructure of industry.⁴³ Now, however, the planners are confronted with a growing multiplicity of priority resource claimants as many of the former residual sectors rise in relative importance.⁴⁴

The problems of Soviet agriculture are well known, and the concern of the leadership over the state of affairs in this sector has been extensively chronicled elsewhere.⁴⁵ Ample evidence of this concern is provided by the regime's willingness to spend large amounts of scarce foreign exchange for grain imports, while the top-priority pipeline program among others is delayed by inability to pay cash for imports of large-diameter pipe and pipemaking equipment.

Similarly, the consumer sector now requires greater attention and more resources. For whatever reasons, and presumably they were not all altruistic, the regime has deemed it advisable to increase wages, improve and extend social security coverage, and reduce compulsory purchases of Government bonds by individuals. These measures have increased the purchasing power of individuals and effective consumer demand. The output of consumer goods has also risen, but characteristically the increment has been of the extensive type, that is, more of the same kinds of goods and of the same low quality. And as the level of living has gradually moved away from the bare subsistence minimum, the demands of consumers have become more diversified and more selective. The result has been a glut of certain kinds of consumer goods that chokes the channels of distribution and increases distribution and storage costs, adding an unplanned increment to the claim of the consumer sector on resources, while consumer demand is still far from satisfied and inflationary pressures mount.⁴⁶

The improvements made by the post-Stalin leadership in labor incentives, and particularly the relaxation of harsh physical restrictions on labor mobility, have also aggravated the planners' control of the labor force, particularly as reflected in the growing labor turnover. This apparently has now become one of the important factors in the deceleration of labor productivity growth. And unless the regime is willing and able to return to the Stalinist system of physical constraints, which seems unlikely on both counts, it is necessary to devise new and effective—yet flexible—means of controlling labor. This is very likely to involve greater use of incentives, which in the final analysis means more consumer goods and amenities.⁴⁷

Transportation and other parts of the previously neglected economic infrastructure are also coming in for a greater share of available resources. In the early sixties, for the first time in the history of Soviet transportation, capital investment in all forms of transport increased

⁴³ In a reexamination of Soviet output data for the period of the prewar 5-year plans, Holland Hunter demonstrates graphically the extent to which gains in the output of producer goods were achieved at the expense of consumer goods production. In "Soviet Planning. Essays in Honor of Naum Jasny," edited by Jane Degras, Basil Blackwell, Oxford, England, 1964, pp. 1-31.)

⁴⁴ See John P. Hardt, in "Dimensions," pp. 7-20.

⁴⁵ Among the more recent discussions are: Solomon Schwarz, in "Problems of Communism," March-April 1966, pp. 12-20; Roy D. Laird, in *ibid.*, pp. 21-28; Jerzy F. Karcz, in this compendium.

⁴⁶ Marshall I. Goldman, in *Journal of Political Economy*, No. 4, August 1965, pp. 366-380.

⁴⁷ Considerable insight into the relationship between incentives and availability of material blessings in the Soviet context can be gained from the discussion of the standard of living at the managerial level in Granick, *op. cit.*, pp. 109-127.

more than did the output of this sector.⁴⁸ A senior official of Gosplan has declared that the present level of investment in transportation provides for only "the very most urgent" needs of the economy for these services.⁴⁹ Similarly, capital repair and other auxiliary services to industry are becoming more and more critical. Complaints on the quality and cost of such services are a constant feature of the Soviet technical and general press.⁵⁰

While these and other slighted sectors are pressing for attention, the high-priority heavy industries of the Stalin era have lost little if any of their primacy. In fact, any substantial expansion in some of the neglected areas would even enhance the importance of many of the heavy producer goods industries, such as ferrous metallurgy, for example. Railroads, highways, pipelines, commercial and industrial construction, as well as housing, require large amounts of iron and steel, among other intermediate products. Expanding military and space programs work in the same direction. So also does technological advance—in replacement of existing equipment that is rendered obsolete, as well as in furnishing the equipment for new processes and new industries—despite the savings in consumption of ferrous metals that can be achieved through substitution of other materials and through engineering advances.⁵¹ The other basic mainstays of the Stalinist development pattern—coal and electric power—are similarly affected. The rapid expansion of the chemical industry in recent years has increased the demand for both coal (as a raw material as well as a fuel) and electricity, as well as for the other principal sources of primary energy—petroleum and natural gas. There has been an increasing number of references in the Soviet press to local and intermittent shortages of fuel. Two members of the U.S.S.R. Academy of Sciences have warned that if considerable improvement is not soon achieved in coordinating the different branches of the fuel and power industry, the Soviet Union may be faced with a fuel and power shortage of the proportions of a "disaster" in 1966–68.⁵²

A systematic and comprehensive examination of economic policy measures adopted in the Soviet Union from 1953 to 1962 corroborates the rapid proliferation of priority objectives in the minds of the policymakers.⁵³ During 1953 and 1954 major attention was devoted to agriculture and housing. In the period 1955–58, there was a sharp increase in the list of major objectives, involving principally improvements in the structure of heavy industry production, improvement in

⁴⁸ Ia. B. Kvasha, in Venzher, et al., op. cit., p. 139.

⁴⁹ L. Chertkov, in *Planovoe Khoziaistvo*, No. 9, September 1965, p. 2.

⁵⁰ See, for example, K. Vinogradov, in *Voprosy Ekonomiki*, No. 8, August 1965, pp. 13–21; M. G. Masevich, et al., "Pravovye voprosy material'no-tekhnicheskogo snabzhenia predpriatii sovarkhozov," *Alma-Ata*, 1962, particularly p. 45; V. B. Belkin and G. N. Kholodnaja, "Osnovy organizatsii i ekonomiki promyshlennogo proizvodstva," Moscow, 1964, pp. 128–140.

⁵¹ Ia. B. Kvasha, in V. G. Venzher, et al., op. cit., pp. 168–169; S. A. Kheinman, in *ibid.*, pp. 196–197. The latter states the problem unequivocally: "The rapid growth of the promising new branches of industry—chemistry, electronics, and others—does not in the slightest dispose of the problem of the development of a number of the more important 'old' branches. Among such branches is ferrous metallurgy. Despite tempestuous growth in the production of light metals (aluminum, magnesium, titanium, etc.) and the triumphal march of polymer materials, which are penetrating ever more widely into the traditional metal-consuming branches, it is utterly obvious that in the foreseeable future ferrous metals will retain their position as one of the most important structural materials in industry and construction."

⁵² M. Styrkovich and L. Melentev, in *Izvestiya*, July 22, 1965; see also Kheinman, op. cit., pp. 190–191; Vikent'ev, op. cit., pp. 138–141.

⁵³ Z. Frank and J. Waelbroek, in *Soviet Studies*, No. 1, 1965, pp. 1–43.

Thus the rising costs of growth are adding to the planners' quandary in determining priorities. It has been said in the past that in general the Soviet system can deal fairly well with the problem of "what to produce" in that it can insure priority to those sectors of the economy that promote maximum growth. The increasingly insistent demands of less growth-promoting sectors, such as consumer goods, are no doubt constraining the system's ability to enforce the necessary priorities. But perhaps even more important in the maximization of growth rates is the fact that the former relatively simple equivalence between growth and a few industrial sectors is becoming increasingly complex. Lenin could say with some justification that communism equals Soviet rule plus electrification of the entire country. Stalin could add machine building, coal, and steel to that formula with relatively few complications. But when it is extended to encompass non-ferrous metals, petroleum fuels, and chemicals, with their much more heterogeneous outputs and inputs, the formula no longer gives clear-cut priority guidelines. In a speech at a meeting of Gosplan officials devoted to problems of planning, Premier Kosygin remarked that no one, not even the chairman of Gosplan himself, could say whether the new plans being worked out at the time really did provide for the proper proportions among sectors of the economy.⁶⁸

The growing difficulties of central decisionmaking

The growth achieved by the Soviet economy under the Stalinist model has in itself made the task of planning more difficult, if for no other reason than simply by making the economy larger and less wieldy. There are now no less than 2 million enterprises and organizations operating on an independent accounting basis (*khozraschet*) engaged in the production and distribution of material goods.⁶⁹ These millions of economic entities, producing thousands of different types of products and performing innumerable different kinds of operations, must be welded by the central planning institutions into a single unified system where all of the elements and their activities are intermeshed.

Even so, sheer growth in numbers is by itself perhaps one of the less important factors complicating the task of planners. It has, however, also been accompanied by a considerable increase in diversity—in outputs, inputs, production processes—and changing proportions.⁷⁰ And this growing diversity is making the task of detailed planning even more intricate. As the number of finished products, semifabricates produced by specialized enterprises, and raw materials grows, and as productive processes become more specific, the degree of interdependence within the entire system grows more than proportionally. The increasing sophistication of production techniques, greater demands for unique quality specifications of materials, and narrowing ranges

⁶⁸ As reported in *Planovoe Khoziaistvo*, No. 4, April 1965, p. 7.

⁶⁹ A. Birman, in *Planovoe Khoziaistvo*, No. 3, 1963, p. 13.

⁷⁰ For example, in 1940 the U.S.S.R. produced 320 types of metalworking equipment. This figure rose to 900 types in 1957, and the 1965 plan called for the production of 1,500 types (P. A. Khromov, "Nekotorye zakonomernosti razvitiia promyshlennosti SSSR," Moscow, 1963, p. 185). Soviet ferrous metallurgy now produces over 900 steel shapes, 5,000 size and shape variations in rolled metal, and over 400 grades of steel and steel alloys (Vikent'ev, *op. cit.*, p. 146). Prior to 1957, the assortment of centrally distributed goods encompassed about 6,000 to 7,000 items. Now the central planning agencies compile material balances and distribution plans for nearly 20,000 commodities. (*Kommunist*, No. 15, October 1964, p. 54).

of tolerances in physical dimensions for machinery and other precision products, reduce input substitutability and make the entire system more rigid. These phenomena, normal in a developing economy, place greater and greater burdens on detailed micro planning. Academician A. A. Dorodnitsyn, the director of the computer center of the U.S.S.R. Academy of Sciences, has stated that "in a growing economy the number of linkages and ties increases as the square of the number of separate elements and the difficulty of plan optimization increases even faster—as the cube of the growing number of elements."⁷¹ Numerous other Soviet economists second Dorodnitsyn in stressing the growing complexities of production and distribution and the increasing inflexibility and rigidity of the system with a corresponding decrease in the effectiveness of detailed central planning and direct administrative controls.⁷²

Soviet planning was never too effective and the "Sturm and Drang" period of the thirties was marked by numerous and recurring errors on the part of planners and administrations. Thus it is difficult to fully relate specific shortcomings and inefficiencies of present-day planning to the changing nature of the economy and to the growing degree of interdependence. However, there is evidence that clearly points to this particular phenomenon. Apparently greater strains and pressures are observed throughout the system. For instance, a leading Soviet statistician, I. S. Malyshev, notes "growing inconsistencies between production and demand" and illustrates this by pointing out that "* * * between 1952 and 1963 production increased two-three times but, judging from requests of enterprises and the energy with which everybody demands capital and material resources, the shortages in the country today are substantially more severe than 10 years ago."⁷³ The alarming rapid growth of unsold stocks of consumer goods and of uninstalled capital equipment, continuing increases in unfinished construction, growing delays in utilization of newly completed productive capacity, wasteful shipments in the transportation system and returned deliveries in the supply network—all well documented in both the Soviet and Western press—testify to the same phenomenon.⁷⁴

One of the striking features of the Soviet planned economy is the crudity of the management system by which it is controlled. Although large volumes of data flow from the operating enterprises to the various levels of the administrative and planning hierarchy, much of the information is irrelevant or of poor quality from the standpoint of the people who use it. Most of it is processed by rather primitive methods, and by the time it reaches the top levels of planning it is

⁷¹ In the preface of I. M. Muminov (ed.), "Matematicheskie metody i EVM v ekonomicheskikh issledovaniakh," Tashkent, 1965, p. 7.

⁷² A. Aganbegian in "Vestnik Akademii Nauk SSSR," No. 6, 1964, pp. 65-66; N. Fedorenko in "Ekonomika i Matematicheskie Metody," No. 3, 1965, pp. 315-316; V. V. Novozhilov, in "Ekonomika i Matematicheskie Metody," No. 5, 1965, pp. 644-645.

⁷³ I. S. Malyshev, "Ekonomicheskaja nauka i khoziaistvennaia praktika," Moscow, 1965, p. 43. Malyshev's point can be illustrated by the following: according to one source the initial requests for materials in the preparation of the 1961 Plan were overstated in rolled ferrous metals by 3,500,000 tons (6 percent of total output) and in steel pipe by 700,000 tons (11 percent). (P. Furduev and I. Burshtein, in *Planovoe Khoziaistvo*, No. 1, 1962, p. 38).

⁷⁴ During the period of the Seven-Year Plan, warehouse stocks of uninstalled equipment (some of it imported) more than doubled. At the same time, in mid-1964 over 60 percent of newly built production space was not being used, partly because of lack of equipment. (T. Khachaturov, in *Voprosy Ekonomiki*, No. 2, 1966, p. 7.)

often out of date and may be further distorted. The very volume of data makes it difficult for the system to cope with it, and much of the relevant information may be lost in aggregation or conversion. Each of several parallel information systems imposes a burden on the enterprises. And there seems to be little standardization of data or coordination of the parallel systems. Lack of the proper information and delays in its availability reduces the ability of the economy to respond to trouble signals or to change direction smoothly when change is called for.⁷⁵

Even if the information flows upward from the operating level were adequate, there would still remain the problem of the transmission of orders downward from the central authorities to the enterprises that carry them out and of means to insure that the execution conforms to the center's wishes. A variety of slight distortions can appear at each of the several hierarchical levels in the system, and their cumulative effect can be quite large by the time the operating level is reached. At the enterprise level itself there are various ways of distorting or evading the planners' intentions. This is particularly true where change is involved; systemic inertia tends to inhibit innovation and vested interests may actively oppose it.⁷⁶

Thus the system has been moving by inertia in the direction of a greater and greater accumulation of micro controls at the center. The central economic authorities, such as Gosplan, U.S.S.R. Sovnarkhoz, and various state committees were expected to and in fact have gradually expanded the scope of their authority and extended their controls. The central planning agencies have been constantly reminded of the necessity for expanding the coverage of centrally-determined "normativity"—the general Soviet term for various measures of the utilization of inputs for production of specific output, for example, man-hours of labor required for a given job, tons of metal and kilowatt hours of energy needed for producing a given machine, et cetera. Thus the October 13, 1961, decree of the CPSU central committee and the U.S.S.R. council of ministers called for extension of prescribed materials "normativity" (coefficients) to all raw materials, fuels, and electrical power. The number of products distributed by the central planning agencies has also been steadily expanding. According to one author, in 1960 the list of centrally distributed products comprised 13,000 items; by 1962 this list had been extended to 18,000 products.⁷⁷ The same author ridicules the notion that improvement in planning entails extension of direct controls and asks whether improved planning means that by the year 2000 the list of centrally distributed products is to grow to 40,000 or 400,000 items.⁷⁸

Clearly, this inflation of detailed direct controls has placed greater and greater demands on the central bureaucracy and the entire information gathering and communication system. While official Soviet employment statistics show a fairly modest, and stable, number of

⁷⁵ Richard W. Judy, "Information, Control, and Soviet Economic Management," paper delivered at the Conference on Mathematical Techniques and Soviet Planning, Rochester, N.Y., May 7, 1965 (to be published shortly by Yale University Press). See also Gregory Grossman, "Soviet Statistics of Physical Output of Industrial Commodities," Princeton Univ. Press, 1960.

⁷⁶ Grossman, *op. cit.*, especially pp. 31-57.

⁷⁷ A. Birman, in "Ekonomicheskaya Gazeta," No. 13, Mar. 30, 1963, p. 7.

⁷⁸ A. Birman, in "Novyi Mir," No. 12, 1965, pp. 209-210.

employees in the central government apparatus and agencies of overall economic administration—about 1,300,000⁷⁹—Western specialists have challenged this figure.⁸⁰ Some authoritative Soviet economists and planners have also contradicted the official figures and have indicated alarmingly rapid growth in the number of planners and controllers—growth that outstrips the growth of national income or of the total labor force. N. P. Fedorenko, director of the Central Institute of Mathematical Economics, has estimated that in reality about 12 million people are engaged in the “sphere of administration.”⁸¹ V. M. Glushkov, a leading Soviet mathematician and director of the Ukrainian Institute of Cybernetics, has calculated that the volume of economic planning and administration increases as the square of the gross product and that if present-day methods do not change, by 1980 the entire adult population of the country will be employed in administration.⁸² Perhaps even more significant than this forecast itself is the frequency with which it is cited in the Soviet press.⁸³ If these trends continue the system could choke itself and in a not too distant future.

Adjustments in the channels of communication between the center and the enterprises can undoubtedly bring some improvement in economic performance. But minor adjustments would probably produce small results, and their effects would most likely be of short-term duration. Major adjustments, on the other hand, such as would have a substantial effect on performance, would require some fundamental changes in the system, most especially perhaps in respect to the extent of party involvement in the operation of the economy. In the 1957 organizational reforms, Khrushchev tried to bring about improvement by such nonfundamental adjustment and, judging by his successors’ descriptions of his reforms, succeeded only in developing an administrative system that was even more chaotic and restrictive than the one it replaced. Still unresolved is the basic conflict of the system: it is at one and the same time a measure of performance and a means of control. The primary data used for planning and decisionmaking purposes are generated largely by individuals and groups whose performance is evaluated, and whose rewards or punishments are determined, on the basis of the same data.⁸⁴

CHAPTER III. THE SEARCH FOR A NEW PATTERN

THE KHRUSHCHEVIAN APPROACH: THE PARTY’S SEARCH FOR ACCOMMODATION

Despite the many administrative changes that have been made in the Soviet economic system since the death of Stalin, the basic elements of the Stalinist model are still in force. A high rate of investment, priority to producer goods industries, collectivized agriculture, and tight central control of the economy are still the cardinal features

⁷⁹ TsSU, “Narodnoe khoziaistvo SSSR v 1964 godu,” Moscow, 1965, p. 547.

⁸⁰ See L. Smolinski and P. Wiles, in “Problems of Communism,” vol. XII, No. 6, November–December 1963, p. 22.

⁸¹ Vestnik Akademii Nauk, No. 10, October 1964, p. 4.

⁸² V. M. Glushkov, in “Literaturnaia Gazeta,” Sept. 25, 1962.

⁸³ For example, see M. Fedorovich, in “Ekonomicheskaja Gazeta,” No. 45, Nov. 3, 1962, p. 32; V. Sokolov, in *ibid.*, No. 16, Apr. 20, 1963, p. 3; editorial in Planovoe Khoziaistvo, No. 10, October 1962, p. 5; V. V. Novozhilov, in “Planirovanie i ekonomiko-matematicheskie metody,” edited by N. P. Fedorenko, Moscow, 1964, p. 311.

⁸⁴ Grossman, *op. cit.*, pp. 128–129; see also Berliner, *op. cit.*, pp. 160–181.

of the system. In general, the efforts of Stalin's successors, Khrushchev in particular, have been directed toward redressing in an ad hoc and haphazard manner, the grossest imbalances, inequities, and inefficiencies of the system with as little alteration of the basic framework as possible.

Some of the most significant changes have occurred in the sphere of labor controls. The most abhorrent Stalinist practices—forced labor camps, forced recruitment of labor—have been eliminated or mitigated. Stringent restrictions on the spatial and occupational mobility of labor have been relaxed. The harsh penalties for unauthorized quitting of job, absenteeism, and tardiness have been reduced. Improvements have been made in working conditions, fringe benefits, grievance procedures, and wage rates.⁸⁵ In brief, in the area of labor relations, there has been a trend away from coercion and toward positive incentives, away from direct administrative controls toward indirect and more flexible controls. These changes may have been instituted in part to improve labor productivity and efficiency, but they have made it more difficult to enforce strict labor discipline. Much of what the Soviets consider an alarmingly high rate of labor turnover is due to the "spontaneous, unorganized movement of labor."⁸⁶ In many cases, this has contributed materially to high labor costs and to regional labor shortages combined with surpluses of labor in other areas.⁸⁷

In other aspects of the economy, Khrushchev's approach to the solution of economic problems was administrative reorganization and a reshuffling of responsibilities. Major reorganizations were followed by the creation of new agencies and the enactment of stopgap measures to fill in the weak spots of the reorganized system as they showed up after it was in operation. Despite avowed intentions of decentralizing and greater local autonomy, the end result was even tighter central control in many respects and greater involvement of party officials in economic affairs.

In agriculture, Khrushchev made a major institutional change with the abolition of the machine-tractor stations (MTS) in 1958. From the standpoint of relaxation of central control, however, this change was more apparent than real. Although the MTS had originally been established to reinforce the regime's grip on agriculture and to extract for state purposes the greatest possible share of the peasants' product, they had apparently outlived their usefulness in this respect and in addition had become a major source of agricultural inefficiency. Other means of achieving these ends had been established; compulsory de-

⁸⁵ See Edmund Nash, in "Dimensions," pp. 393-407.

⁸⁶ T. N. Belova, in L. S. Bliakman (ed.), "Voprosy proizvoditel'nosti i oplaty truda v period stroitel'stva kommunizma," Leningrad, 1964, p. 88. Another author complains that " * * * in recent years the national economic importance of and need for planned regulation of the processes of population movement * * * have been somewhat underestimated, and the organizational and economic levers of such regulation have been weakened." (In E. V. Kasimovskii (ed.), "Problemy ekonomiki truda," Moscow, 1965, p. 275.)

⁸⁷ Data from a survey of plants in the Moscow area, conducted by the economics department of Moscow State University, show a significant inverse relationship between the extent of plan fulfillment and the rate of labor turnover (V. N. Iagodka (ed.), *Puti likvidatsii tekuchestii kadrov v promyshlennosti SSSR*, Moscow, 1965, pp. 20-21). A similar phenomenon has been noted in Novosibirsk (P. P. Luzan, in A. N. Grzhegorzhevskii, et al., *Problemy povysheniia effektivnosti obshchestvennogo truda v S.S.S.R.*, Moscow, 1965, pp. 280-281). See also Belova, op. cit., pp. 82-97; Kasimovskii, op. cit., pp. 256-275; E. S. Rusanov, *Zaniatost' naseleniia i ispol'zovanie trudovykh resursov*, Moscow, 1965, pp. 79-85; A. M. Zagorodneva and K. S. Remizov, *Balansovyi metod planirovaniia rabochel'sily*, Moscow, 1965, pp. 11-12.

liveries to the state were still exacted, and generally at a high level. Central control of agriculture was even increased through conversion of some collective farms into state farms and through amalgamation of many collective farms. Some improvements were made in the structure of agricultural prices and in the system of income incentives to collective farmers. But on the whole, administrative control of collectivized agriculture remained in full force and may indeed have been even strengthened.⁸⁸

A not insignificant element in Soviet agriculture—individuals' private plots—has generally escaped the tight control exercised over the bulk of agriculture. In respect to this sector, Khrushchev's policy was ambivalent and vacillating, with alternating restrictive and permissive measures. Although compulsory deliveries from the output of the private plots were abolished in 1958, restrictions were later imposed on the size of the plots and on the availability of material inputs.⁸⁹

In an attempt to eliminate some of the bureaucratic fetters imposed on the economy by highly centralized control, in 1957 Khrushchev abolished most of the central ministries dealing with economic affairs and replaced them with a regionally organized system of economic councils. The latter, however, soon developed hindrances of its own; the problems associated with the "departmentalist" tendencies of the ministerial system were supplanted by equally objectionable tendencies toward "localism" under the new setup. To counteract these tendencies, a superstructure of central "state committees" and larger regional and nationwide economic councils was generally superimposed on the system of regional economic councils, and was capped by a "supreme" economic council in 1963. Eventually this system became as cumbersome and rigidified as the one it replaced, and it has undoubtedly contributed materially to the problems of information flow, both upward and downward, and to coordination of planning.⁹⁰

Khrushchev is usually thought of as a champion of "campaignology"—the tactics of instituting change or breaking bottlenecks through an intensive and extensive "campaign" that is often hurried and wasteful and sometimes ill-advised. In agriculture, he is associated with the "campaigns" of plowing up the virgin lands, expansion of acreage under corn, reducing the area in fallow and grasslands; in industry he is given credit for relatively drastic and sudden changes in the sectoral structure, notably the forced expansion of the chemical industry. However, Khrushchev was following a well established Stalinist tradition that has been used throughout Soviet history, and in fact it is the nature of the system that commands or suggestions from the leaders should be followed up with more than desirable zeal. Although this may have been a useful technique for rapid economic growth during the early period of Soviet industrialization, in a technologically and industrially more mature economy such tactics may cause upheavals and aggravate distortions that become serious ob-

⁸⁸ Volin, in "Comparisons," pp. 285-311; Howard R. Swearer, in Roy D. Laird (ed.), op. cit., pp. 9-40, with commentary by Jerzy F. Karcz, in *ibid.*, pp. 41-50.

⁸⁹ Volin, in "Comparisons," pp. 299-301, Karcz, in this compendium.

⁹⁰ Fuller analyses of the economic measures adopted under the Khrushchev regime are given in Gregory Grossman, in "Problems of Communism," March-April 1963, pp. 32-41; Alec Nove, "Economic Rationality and Soviet Politics," Praeger, New York, 1964, pp. 99-118, and the same author in "Problems of Communism," January-February 1963, pp. 10-25; Levine, in "Dimensions," pp. 47-65.

stacles to growth. Some Soviet economists have argued that at least part of the rising capital-output ratio in the economy, and consequently part of the slowdown in the growth rate, is due to the haste with which recent structural changes have been effected.⁹¹

PLANNING IN FLUX: THE ECONOMISTS' QUEST FOR RATIONALITY

Many western scholars have observed that by the late fifties the Soviet system had arrived at a crossroads,⁹² but all alternatives perceived by the political leadership have certain political and ideological pitfalls and none—at least to party doctrinaires—represents a fail-proof guarantee of economic success. The difficulty of choice has been further compounded by the fact that the post-Stalin leadership has been displaying some confusion with respect to the ultimate politico-economic goals of the system. The revolutionary fervor has spent itself, the short-range goals of rapid industrialization and building up of a powerful military machine have been largely achieved, direct support of world Communist revolutions and world dominance has apparently been scaled down on the priority list, as the Chinese ideologists tirelessly keep pointing out. The transformation of the Soviet socialist society into a Communist world of plenty has ceased to be a heroic, pseudoreligious, distant goal. The vision that has inflamed generations of Communist followers lost some of its appeal when the leaders found it necessary to engage in estimation of per capita shoe production in the future Communist society (22d Congress Party program). The normal, for a group in control, goal of preserving one's power leads to a desire for maintaining the status quo, but this is precisely what the regime cannot do.

By the late fifties it was clear that the planning and control system simply could not cope with the new problems. The overcentralized (in the micro sense) system lacked direction and presented growing evidence of inefficiency. The most painful aspect of this institutional stagnation from the point of view of the leadership has been the gradually declining responsiveness of the system to commands from above, which is eroding the policymaking powers of the party.

The inadequacy of present overall economic controls is further illustrated by the unending and so far fruitless discussion on setting up an overall balance sheet for the national economy that would integrate the balance sheets for individual products, national income flows, consumption and investment, and monetary flows. While the need for such a single equilibrating instrument of planning has been strongly felt since the late twenties, no serious attempt has been made to design and implement one. Strumilin lamented the absence of such a balance as early as 1954,⁹³ and other economists and planners have regularly advanced proposals for one. However, as most specialists testify, the problem of a single integrated plan has remained basically unresolved.⁹⁴ In the last 4–5 years, interest has shifted to the construction and operation of *ex-post* and planning input-output tables. Sub-

⁹¹ For example, see Kvasha, *op. cit.*, pp. 160–164.

⁹² Robert W. Campbell, "Accounting in Soviet Planning and Management," Harvard University Press, 1963, pp. 205–206.

⁹³ *Voprosy Ekonomiki*, No. 11, 1954.

⁹⁴ M. Z. Bor, in *Voprosy Ekonomiki*, No. 3, 1963, p. 5; E. L. Vairadian, in "Voprosy statisticheskoi metodologii," edited by I. G. Maliy, Moscow, 1964, p. 232.

stantial human and financial resources have been allocated to this work, and several rather impressive national and regional input-output tables have been prepared. However, as with other sophisticated tools of economic analysis, input-output techniques remain essentially in an experimental stage and have not been integrated with planning.⁹⁵

The emergence of a new school of economics

Thus the need for change and reform has been clearly recognized. But change in what direction? The difficulty confronting the leadership has been compounded by the very nature of the system which, to say the least, is not conducive to open and thorough examination of meaningful politicoeconomic alternatives. While many of the oppressive aspects of Stalin's era have gradually disappeared, the debate on economic reforms was and is by no means free, although in looking back over the past 2-3 years a Western observer is surprised by the candor of the criticism and the unorthodoxy of the alternatives proposed by some of the more recalcitrant economists and planners.

A complete return to Stalinism with or without an omnipotent dictator has never been a feasible choice and not only for political reasons. Stalin's methods were simply too crude to be applied to a more mature economy and, furthermore, the inefficiency syndrome has been clearly identified as Stalin's heritage.

A much more appealing choice supported by many professional economists and planners is seen in a highly centralized hierarchic system but with a much more sophisticated control and information mechanism. The supporters of the centralized system have refused to accept any general criticism of the existing state of affairs and see only isolated shortcomings and defects in specific instances—all of which are, in their opinion, correctable. In their defense of the present system, the advocates of the status quo, the dogmatists of the economic and planning professions, and the proponents of centralization generally received some unexpected help from a new quarter—the rapidly developing science of data processing and the emerging school of mathematically oriented economists.

For a long time mathematical economics was condemned in the U.S.S.R. as essentially alien to the Soviet science of political economy. Linear programming, input-output analysis, game theory, the multitude of new techniques offered by econometrics, and other applications of mathematics to economics were developed and applied largely in the West and this fact in itself made the new methods unpalatable to the Soviet leadership. Under Stalin and well into the fifties, the responsibility of the emasculated Soviet economic profession was reduced to interpretation and propagation of the tenets of Marxism-Leninism-Stalinism, to favorable elucidation of Soviet economic progress, and to minor, essentially technical, studies of very limited scope. In the somewhat more liberal atmosphere of the post-Stalin years, a slow recovery began but, by and large, nothing of significant theoretical or applied importance has yet appeared, with the exception of one area—that of mathematical economics.⁹⁶ Trained almost exclusively by Aca-

⁹⁵ Vladimir G. Treml, "Input-Output Analysis and Soviet Planning," paper delivered at the Conference on Mathematical Techniques and Soviet Planning, Rochester, N.Y., May 7, 1965 (to be published shortly by Yale University Press).

⁹⁶ Alfred Zauberman, in *Survey*, July 1965, pp. 118-124.

demicians V. Nemchinov and L. Kantorovich and Prof. V. Novozhilov—who have long been considered dissenters and heretical—young mathematically oriented economists began to explore Western models and methods. These attempts met with bitter opposition on the part of the older, more dogmatic members of the profession, who accused the new school of employing anti-Marxian methods and of succumbing to “bourgeois vulgar science.” The party, however, contributed somewhat to the progress of the “new economics” by adopting a position of near neutrality in the dispute. Impressed by the revolutionary progress in computer technology in the West and cognizant of the need for parallel development of “software” such as information systems, theoretical models, and the like, the party left the new school almost completely free to explore the new methods.

Especially in the early days of the debate, the proponents of the new techniques explicitly or implicitly promised a panacea for all the ills of the economy—a streamlined system of reporting and collection of data, invigorated methods of control, rapid estimation of feasible alternatives and construction of mutually consistent plans. For example, very ambitious plans for “cybernetization and computerization” of planning were laid out in a paper presented to the April 1960, Conference on Mathematical Applications in Economics and Planning by an early proponent of mathematics in planning.⁹⁷ All this was apparently to be effected without major changes in the system. The leadership was, needless to say, enticed by the emerging vision of this paragon of central planning: the entire country is covered by a network of computers, which receive and process primary economic data, pass the information on to a few large computer centers and then to a central master computer complex. This “giant central brain” would then check and sort out all the information, correct all inconsistencies, reduce the mass of data to a few macroeconomic indexes, and finally present the political leaders with a set of feasible alternatives.⁹⁸ The first more or less open clash between economists and planners favoring an extensive computerized system with detailed microcontrols and members of a new school advocating introduction of more rigorous mathematical analysis with concomitant decentralization of decisionmaking occurred at the March 1964 “Round Table Discussion by Economists and Mathematicians.” As one participant observed later, the “round table” proved to have rather sharp edges as economists of the older generation accused the young radicals of disdain toward Marxism, and the latter retorted that the disdain was directed not toward Marxism but toward the dogmatic interpretation of it.⁹⁹

It is impossible to say whether all members of the new school were completely convinced of the feasibility of such a system or whether this was simply a stratagem to lure the party ideologists into acceptance of the new techniques. There is strong evidence that the latter was true in many instances. That the stratagem was effective is evidenced

⁹⁷ V. D. Belkin, in V. S. Nemchinov (ed.), “Obshchie voprosy primeneniia matematiki v ekonomike i planirovani,” vol. I, Moscow, 1961, pp. 129–149.

⁹⁸ The proposed integrated system of computer centers and fully automated collection and processing of economic information is described by N. Fedorenko in *Pravda*, Jan. 17, 1965, and by A. Bolarskil and V. Dzhaparidze in *Ekonomicheskaya Gazeta*, No. 7, Feb. 17, 1965, pp. 13–14.

⁹⁹ A. M. Matlin, in “*Ekonomika i Matematicheskie Metody*,” No. 4, 1965, p. 625.

by the position of neutrality taken by the party in the ideological struggle with the dogmatic economists and by the substantial resources allocated to economic experiments.

The hopes for immediate integration of new techniques such as input-output analysis or linear programming with operational planning soon proved to have been premature. The more extensive became the exploration of new methods, the more defects and shortcomings of the existing system were exposed. Gradual improvement of planning and data processing through applications of computers and new techniques appeared less and less promising and the new school began to demand wide ranging radical reforms of the entire system. The grand scheme of a computerized system with detailed central planning and control also turned out to be unfounded.¹⁰⁰ Not only the young radicals but also such authorities as Academician A. Dorodnitsyn dismissed such plans as impossible in practice and advocated "autonomy of individual blocs which would be motivated not by outside controls but by inner economic stimuli."¹⁰¹ Numerous other economists of the younger generation, including some of the best known names in the U.S.S.R., have joined in rejecting the computerized paragon of centralization.¹⁰² The same critics have regretfully observed that so far the introduction of new mathematical techniques and computers has had hardly any effect on planning efficiency and have suggested that piecemeal improvements would not help and that a complete overhaul of the entire system is the only solution.¹⁰³ By 1964-65 most members of the new school unequivocally came to support decentralization and the transfer of most controls from the detailed microlevel to the macrolevel. Thus the political leadership came face to face with a new alternative.

It is difficult to find an appropriate term for the incipient system or to describe it accurately, because it is still rather vague. Essentially, the new system calls for a high degree of local autonomy for producers and suppliers. Detailed planning of every important aspect of production would disappear, to be replaced by minimal direct guidance from above. Thus, in contrast to the system which has been used since the early thirties, the enterprises would have some freedom to choose among alternative production techniques, to decide on levels of utilization of labor and capital equipment, on introduction of new technology, and the like. Tentative steps have been taken toward replacing State administered distribution of materials among producers by direct commercial relations between suppliers and users. The proper direction of development of the economy would be maintained by introduction of new or reinforcement of existing economic levers and instruments such as a revised price system, profit, credit, taxes, and interest payments. These were essentially the terms of the new reforms announced by the September 1965 plenary session of the Central Committee. However, while the announced reforms constitute a radical, and prob-

¹⁰⁰ See Gerald Segal, in *Problems of Communism*, March-April 1966, pp. 1-12.

¹⁰¹ "Ekonomisty i matematiki za kruglym stolom," Moscow, 1965, p. 121.

¹⁰² V. Belkin and I. Birman in *Izvestiya*, Dec. 4, 1964; V. O. Cherniavskii, "Effektivnost' ekonomicheskikh reshenii," Moscow, 1965, pp. 221-222; S. Pervushin, in *Ekonomicheskaya Gazeta*, No. 10, March 1966, p. 26; E. Liberman, in *Radianskaya Ukraina*, Dec. 30, 1964.

¹⁰³ V. Belkin and I. Birman, loc. cit.; A. Aganbegian as quoted by A. Smirnov-Cherkezov in *Literaturnaya Gazeta*, No. 57, May 14, 1964; I. Birman in *Literaturnaya Gazeta*, No. 72, June 18, 1964; L. Cherkashin in *Izvestiya*, Nov. 18, 1964, p. 3.

ably irreversible, break with the past, the emerging new system appears to be haphazard, with numerous gaps and ambiguities. A thorough analysis of measures already enacted or promised in the near future and statements by leading planners, party functionaries, and economists leaves the impression of a wide-open field inviting experimentation and further reforms. As of today, a prediction of the emergence of a market economy would appear to be as reasonable as a prediction of the formation of a novel type system with local autonomy in most production and distribution decisions and powerful overall controls operating at the macro level.

The Soviet economic control engine has developed an inertia of its own and this may modify some of the proposed reforms.¹⁰⁴ It will be recalled that the abrupt change from the ministerial system to the system of regional economic councils in 1957, which was heralded as a major decentralization reform both in the U.S.S.R. and in the West, rapidly lost its momentum and trends toward "recentralization" emerged rather soon. The reforms announced in September of 1965 did not spell out in detail either the process of transformation to the new system or the system itself, and elaboration of these details was delegated to the bureaucracies of appropriate state committees and agencies, which have responded faithfully. The character and scope of the resulting new regulations, all of which are termed "temporary," appear to be somewhat more detailed and more stringent than the spirit of the September reforms would warrant.¹⁰⁵ It is also significant that Prof. A. Birman, who is emerging as the principal commentator on the 1965 reforms, is critical of some unwarranted restrictions—formulated after the September plenum—on the autonomy of industrial enterprises in the distribution of excess profits.¹⁰⁶

The key to the future success or failure of the announced reforms, and to the very nature of the new system that will emerge, probably lies with the price system. The discussion on the so-called law of value and price formation under socialism in the U.S.S.R. has a long and tortured history. In a sense, Stalin himself opened the floodgates of the debate in 1952 in his book "Economic Problems of Socialism" by unequivocally stating that values and prices are still relevant in the Soviet system, at least in the sphere of consumer goods. The discussion of what actually constitutes a price under socialism and of a "rational" mode of price formation has continued since that time through endless conferences, congresses, and meetings. No other single topic has taken so much of the attention of economic theorists, statisticians, and planners in postwar years.¹⁰⁷ While the debate has continued unabated, with all participants stressing the paramount importance of "rational pricing," the functions of value relations and prices have remained rather limited in the actual operation of the system. Unchanged since the early thirties, the planning mechanism has relied essentially on physical measures for most important planning instru-

¹⁰⁴ A staff correspondent of *Ekonomicheskaja Gazeta* (No. 12, March 1966, p. 32) notes, and describes, spreading symptoms of the old disease of "departmentalism."

¹⁰⁵ For a partial list of these regulations see *Ekonomicheskaja Gazeta*, No. 6, February 1966, pp. 19, 31-35; No. 7, February 1966, pp. 31-32; No. 11, March 1966, pp. 23, 43; No. 12, March 1966, p. 36; No. 13, March 1966 p. 29; No. 17, April 1966, p. 32. An examination of other sources suggests that there also are regulations which have not been published in the periodical press.

¹⁰⁶ *Pravda*, Mar. 9, 1966.

¹⁰⁷ Alfred Zauberman, in "Value and Plan," edited by G. Grossman, Berkeley, 1960, pp. 17-35; Morris Bornstein, *American Economic Review*, No. 1, March 1962, pp. 64-103.

mentalities, such as material balances, gross output targets, and delivery and supply quotas. Prices, in most instances constant prices, fixed by planners' fiat, have been used for control purposes and, in the sphere of consumption, for distribution of consumer goods and extraction of forced savings in the form of a heavy sales tax on consumer goods. Heedless of repeated assertions of the importance of prices, the planning and administrative officials have continued to operate with physical measures and have even tended to expand the scope and importance of nonprice measures.¹⁰⁸

The theoretical debate has been inconclusive and, if anything, has led to more diversified opinions.¹⁰⁹ Most of the theoretical economists and planners have held tenaciously to the traditional Marxist concept of prices as reflecting the real cost of production and hence not subject to fluctuations generated by demand. This group has focused its attention on the mechanics of cost calculations, problems involving the level of profitability of enterprises, the stimulus provided by prices to technological innovation, and problems of the redistribution of national income through sales taxes and profit margins included in prices. A much smaller group, led by Nemchinov, Kantorovich, and Novozhilov and consisting mainly of younger, mathematically oriented economists, has gradually adopted the Western concept of flexible prices which serve as indexes of relative scarcity and are essentially bits of "instant information" reflecting continuously changing supply and demand conditions. Defined this way, prices guide decisionmakers in their choice of alternatives and generally serve to equilibrate the multitude of interrelated economic processes.

The two positions have remained unreconciled, although the award of the prestigious Lenin prize in science and technology to Kantorovich, Nemchinov (posthumously), and Novozhilov in 1965 greatly strengthened the position of the new school.¹¹⁰

However, the apparent isolation of the theoreticians from actual price setting remains as strong as ever. Various agencies of Gosplan and other organizations have been working on price reform for years. In July of 1960, the Central Committee of the party expressed strong dissatisfaction with the haphazard methods of price setting and ordered a complete revision of all heavy industry wholesale prices to be completed in 1962.¹¹¹ Apparently the price specialists encountered difficulties as the introduction of new prices was repeatedly postponed. Finally it was announced that the new prices would be ready for introduction on January 1, 1966.¹¹² Unfortunately for the specialists

¹⁰⁸ A. M. Birman, "Nekotorye problemy nauki ob upravlenii narodnym khoziaistvom," Moscow, 1965, p. 73. An interesting illustration of the lack of communication between state officials dealing with actual setting of prices and academicians debating the various issues involved can be seen from the report on a Central Statistical Administration conference on price and finance statistics held in December 1964. Among the 10 participants mentioned in the report we do not find a single name of a prominent theoretician (Z. S., *Vestnik Statistiki*, No. 4, 1965, pp. 68-70). Similarly, officials dealing directly with price setting have participated in the theoretical debate to only a very limited extent.

¹⁰⁹ R. Campbell, in *Slavic Review*, October 1961, p. 402-418.

¹¹⁰ The struggle of the two groups has become quite intense in the last year or two. An almost complete polarization of opinions emerged at the special conference of the Academy of Science held early in 1964 (*Voprosy Ekonomiki*, No. 3, 1964, pp. 150-153), and at the "Round Table Discussion by Economists and Mathematicians" in March of the same year ("*Ekonomisty i matematiki za kruglym stolom*," Moscow, 1965).

¹¹¹ L. Maizenberg, in *Voprosy Ekonomiki*, No. 11, 1961, p. 42.

¹¹² B. Lakhov, Deputy Director of the Budgetary Administration of the U.S.S.R. Ministry of Finance, reported that the price revision had been carried so far that even the state plan and the budget for 1964 were recalculated in terms of new prices (*Ekonomicheskaya Gazeta*, No. 25, June 20, 1964, p. 5).

who have spent some 6 years on the project, a few months before the target date the new prices were summarily scrapped by a decision of the September 1965 plenary session of the Central Committee.

At this plenum Kosygin did call for a complete overhaul of the price system and a specially established state committee was ordered to prepare the basic outline of a new price reform by January 1, 1966. However, Kosygin's charge to the committee was very general and no specific guidance was offered on the host of theoretical and practical problems that have been plaguing the formulation of prices in the U.S.S.R. in recent years and that are still being debated by academicians. As could have been expected, the new state committee did not produce the requested outline by January 1 and, judging from articles and papers that have appeared in the press since the September plenum, the profession is as divided on the basic problems of price setting as ever.¹¹³ Some progress has been evidenced since then, but it is still too early to say what form the new price system will take. Apparently, prices will still be effectively geared to average cost of production with only limited flexibility allowed for effects on the demand side.¹¹⁴

The new economics tempered

The procrastination displayed by the political leadership and the state bureaucracy in the case of prices is characteristic of the entire September reform. Most of the changes introduced or projected are not terminal in any sense and a whole range of problems of macro-controls remains unresolved. The announced introduction of interest charges on fixed and variable capital and expansion of bank financing for new investment clearly represent a drastic departure from the past. At the same time, it is apparent that the sponsors of the reform have not reached a consensus as to how the interest rate should be determined or even whether interest rates should be differentiated for different users of investment funds. However, most planning functionaries, as opposed to theoretical economists, tend to support differentiated rates.

Lenin's abolition of most direct administrative controls and his retreat to the commanding heights of the economy at the introduction of the new economic policy was reasonable and easily implemented; the commanding heights in that case were key industries, enterprises, and service facilities. While discarding many direct microcontrols, the present party leadership clearly intends to retain firm control of the economy through the new commanding heights of macrocontrols such as prices, credit, taxes, and interest charges. It may very well be, however, that the party leaders underestimate the difficulties in effective administration of such a system. The experience of Western Europe and the United States tells us that the art of operating a flexible and efficient monetary and fiscal policy is not mastered in a few years. The advances in theoretical macroeconomics have been quite impressive, and so is the economic stability, employment, and growth

¹¹³ The lack of agreement on basic issues is clearly seen in an 8-page spread on problems of price reform in *Ekonomicheskaja Gazeta* (No. 45, November 1965, pp. 6-13), where 15 specialists presented their views. See also *New York Times*, May 16, 1966, p. 7.

¹¹⁴ V. Sitin in *Ekonomicheskaja Gazeta*, No. 1, January 1966, pp. 12-13; A. Bachurin in *Ekonomicheskaja Gazeta*, No. 7, February 1966, pp. 4-5.

record of the postwar West. However, as all government authorities and economists would readily admit there is still much room for improvement. One may counter this by suggesting that in Soviet conditions the transformation of the system would be comparatively easier. This, of course, is true inasmuch as the political leadership of the U.S.S.R. is still in full control and is relatively unconstrained in its manipulation of prices, taxes, budgets, or the monetary and credit systems. On the other hand, we must be aware of the fact that the Soviet monetary and fiscal systems, which have until now played a very limited role, are rudimentary and completely innocent of intricacies of macrocontrols.¹¹⁵ One could conjecture, for instance, that the new reforms would possibly lead to inflationary pressures and worsening of the unemployment situation. Adverse developments of this nature would not be easy to handle from the new commanding heights of the economy the party leadership is so carefully exploring now.

The unresolved dilemma confronting the regime was reflected in the proceedings of the 23d party congress, which met in March-April of this year. This Congress epitomizes the precarious balance maintained by the political leadership in the U.S.S.R.—a balance between the new and the old, between the dogmatists and neo-Stalinists and the reformers and crypto-liberals, between the party and the state. While a return to Stalinism was ostentatiously rejected by many speakers, the Congress approved reinstatement of the title of "Secretary-General" of the party and changed the name of the "central committee's presidium" back to "politbureau"—both terms that are closely associated with the 30 years of Stalin's rule. Apparently many party members feel that the process of de-Stalinization has gone too far and that condemnation of Stalin's era is too dangerously close to condemnation of the party and the entire system.

In all other respects, the Congress was singularly lacking in dramatics and, one must add, not for want of dramatic issues.¹¹⁶ The Congress could have raised the problem of agricultural organization and the future of the kolkhozy; ¹¹⁷ it could have extended and spelled out in greater detail the economic reforms of last September; it could have announced the long-expected revision of the U.S.S.R. Constitution.¹¹⁸ However, none of these issues were raised at all.

The frank and wide-ranging criticism of economic shortcomings voiced at the September plenary session of the central committee

¹¹⁵ Paul Gekker, in "The Journal of the Institute of Bankers," vol. 84, pt. 3, June 1963, pp. 189-197.

¹¹⁶ The absence of an open clash between the neo-Stalinists and the reformers does not, of course, mean that the two groups have arrived at some *modus vivendi*. The mere fact that the Congress was convened in 1966 and not in 1965 as prescribed by the party constitution indicates important behind-the-scenes maneuvering among the leaders. There is enough evidence of strong pro-Stalin feelings on the part of some leading party members (see, for instance, the speech of the Secretary of the Georgian CP, D. G. Sturua, in *Zaria Vostoka*, Mar. 10, 1966). Probably the best explanation lies in the lack of agreement among the top leaders, who, while differing substantially on a number of issues, have not split into two distinct factions.

¹¹⁷ Given the rationale of the change in industrial organization, a logical extension of the September reforms would be an increase in the local autonomy of kolkhozy and sovkhozy and establishment of direct buyer-seller relations between agricultural organizations and industrial users. Proposals to this effect were made following the September plenum of the central committee (see, for instance, V. Venzher, in *Komsomol'skaia Pravda*, Mar. 22, 1966). And development of such relations was mentioned approvingly in a *Pravda* editorial (Mar. 6, 1966).

¹¹⁸ A special committee to draft a new constitution was formed by Khrushchev; since December of 1964, Brezhnev has been directing its work.

was toned down somewhat and so were the calls for changes. Khrushchev-type boasts and promises of a millennium in the near future were missing. Although some specific targets in the new 5-year plan (1966-70) still appear too ambitious, the assessment of the economy's possibilities was much more somber and realistic. Highly suggestive by its conspicuous absence was the promise "to overtake and surpass America"—an incantation that has been repeated with religious fervor at every congress, conference, or meeting on economic matters since the early thirties. The promises that were made lacked the Khrushchevian flair. Modest improvements in wages and extensions of social security benefits are not very dramatic. The promised reduction of the workweek to 5 days is blunted by the fact that the total number of hours worked per week will not be reduced. A point that probably caught the ear of the population was a reference to reduction and abolition of personal income taxes. The manner in which this promise was made is somewhat symbolic of the entire vacillating and procrastinating congress. In his opening speech Brezhnev promised "to continue" the reduction and abolition of personal income taxes of workers and employees.¹¹⁹ Some 5 days later Kosygin reiterated the promise but modified it by a cautious and hope-deflating reference to the fact that the reform will affect only "certain categories" of workers and employees.¹²⁰

CHAPTER IV. TRENDS AND PROSPECTS

THE AGENDA OF ECONOMIC DECISIONS

The pressure for economic change will continue to place on the Soviet leadership's agenda basic questions as to the organization, concepts, and functioning of their economic system, as well as particular policy questions relating to the allocation of resources among the various claimants. These questions will surface in many ways, including the deliberations of the CPSU central committee and party congresses. The focal point of changes in the pattern of resource allocation and in the system itself is related to reform of the price system and the introduction of indirect fiscal and monetary controls.

Simply put, solutions to the problems will take the form of judgments on the share of resources distributed to the various claimants and on changes in the system that will increase the efficiency of its operation and augment the performance of the Soviet economy in providing the necessary growth of goods and services available to all sectors. This then is the immediate problem for the new planning period of 1966-70.

Decisions on resource allocation must be made within the context of resource availability. It is difficult to abstract from the performance of the Soviet economy and the mechanism within which planning decisions are made and to isolate the problems of the allocation of resources among military and other power augmentation programs, in-

¹¹⁹ This really means reactivating the abolition-of-taxes reform announced by a decree of the Supreme Soviet in May 1960 and discontinued without explanation in September 1962 at the end of the second of the six annual stages in which complete abolition was to have been effected.

¹²⁰ For Brezhnev's speech at the Congress, see *Izvestiya*, Mar. 30, 1966. Kosygin's remark is found in *Izvestiya*, Apr. 6, 1966.

vestment for growth, and the consumption needs of the Soviet populace. There are, however, continuing focal points for decisions on resource allocation involving the following:

(a) *Distribution of the national product.*—In general terms every plan sets goals which determine the allocation of resources among military needs, investment, and consumption. The priorities that determine the allocation are generally consistent with the policy context imposed by the political leadership. As noted above, the prescriptions of the leadership are no longer as clear as appeared to be the case under Stalin. Nonetheless, changes in the historical pattern of resource distribution would presumably require some change in the power structure of the Soviet political apparatus and in the external policies of those who exercise the power. The involvement of the Soviet Union in some foreign military activity might thus influence the defense budget upward, or a meaningful detente with the United States in Europe might provide a basis for reduction of the military burden.

At the same time choices must be made not only between guns and butter but also between guns and the facilities to produce guns or butter. This choice between investment and military outlays was brought home very forcefully to Soviet leaders in the aftermath of the unplanned 1961 shift in priorities from investment to military output. This shift may have been a significant factor in the industrial slowdown that followed, and especially in the problems that emerged subsequently in the energy supply and in development of the chemical industry.¹²¹

As between consumption/investment/military, there is persistent pressure to increase real wage incentives to workers and peasants as a basis for increasing productivity in factory and farm. Moreover, there may be political pressure to give the more vocal groups in the population a larger share in the fruits of Soviet economic growth. Space spectacles do not appear to be an adequate substitute for insufficient housing and consumer goods.

Less significant in the aggregate but important in particular areas of industrial bottlenecks or agricultural supply, especially in bad crop years, is foreign economic activity, including Soviet relations with East Europe. The related growth of foreign economic activities may turn on the advantages and costs of expanded trade and aid with the non-Communist nations and the interrelationships between the Soviet and East European economies.

(b) *Structure of the military budget.*—Within the military budget the allocation of resources as between the general war/space-missile type of armament and the conventional limited war/ground force type would depend in part on the international climate. Moreover, technological developments in weaponry might open new areas of opportunity in the international contest for power. For example, the development of an effective antiballistic missile system with its implications for the balance of power, might, in the Soviet view, justify a massive production effort and the allocation of substantially more resources than in the past.¹²²

¹²¹ See Rush V. Greenslade and Phyllis Wallace, in "Dimensions," pp. 121-124; Martin J. Kohn, in *ibid.*, pp. 225-232; Current Economic Indicators, *op. cit.*, pp. 15-17, 45-50.

¹²² For the potential role of missile defense in Soviet foreign policy and military strategy, see the chapter by John R. Thomas, in "Nuclear Strategy—A World Dilemma," a forthcoming Praeger publication edited by John Erickson.

On the other hand, military involvement of the Soviet Union along its non-West European borders or elsewhere in noncontiguous areas would presumably require an increase in military capabilities other than long-range missiles and space systems.¹²³

(c) *Allocation of investment.*—Within the investment budget, decisions must be made on the continuing priority to heavy industry either for expanded defense needs or industrial growth, and on the other hand, higher priority to investment in the infrastructure of the Soviet economy, including transportation, communications, distribution facilities, and housing, as well as investment in agriculture and light industry. The pressure on the Soviet leadership may be more toward increased production in the former low-priority sectors, if in their judgment the overall efficiency of the economy can be significantly improved only by increasing the effectiveness of these neglected sectors through larger capital outlays for plant and equipment and increased production of consumer goods to provide increases in real income as a basis of incentives for improving labor productivity.¹²⁴ Moreover, there may also be a return to the old priority sectors of coal and steel at the expense of petroleum, chemicals, and nonferrous metals for redressing some of the imbalances that have accrued from past planning mistakes.

(d) *Alternate routes for improving living conditions.*—In providing resources for consumption, a judgment must be made on both economic and political grounds as to the relative costs and benefits that might accrue from higher priority to various programs for increasing the volume and quality of food, clothing, transportation, housing, and other elements of the living conditions of the Soviet population. If the judgment is that the most effective allocation of resources on all counts would require putting an end to the nagging problem of inadequate grain harvests, then agriculture may receive higher priority in respect to investment for improving state and collective farms; greater flexibility may be introduced into the institution of the collective farm (e.g., by upgrading the private plots, or by providing greater incentives through higher prices for agricultural products and a guaranteed annual income for the collective farmers); and progress can be made in ameliorating some of the natural problems faced by Soviet agriculture in raising crop yields; e.g., weather and soil conditions.

Were the quality of food output to be raised—greater production of meat, eggs, butter, etc.—with more investment in distribution and storage facilities and possibly drastic changes in the collective farm system at the same time, the Soviet administration may consider more clothing, more and better housing, or improvement in passenger car transportation as alternative methods for providing the incentives and satisfactions for which there is a felt need among the Soviet citizenry. Passenger car production may indeed be somewhat wasteful in the Soviet view, but the dominant constraint may well be the tremendous cost of providing all the additional investment in roads, repair facilities, service stations, etc., that is implicit in the development of a passenger car society.¹²⁵ Soviet citizens may also be given more con-

¹²³ Cf. John P. Hardt, in *Europa Archiv*, Jan. 21, 1966, pp. 127–138.

¹²⁴ For an analysis of Soviet trends in factor productivity, see Stanley H. Cohn, in this compendium.

¹²⁵ A substantial proportionate increase in automobile production is included in the new 5-year plan for 1966–70, *Ekonomicheskaja Gazeta*, No. 8, February 1966.

sideration in terms of the quality and spaciousness of living space, both in the cities and in the countryside. However, this again may be an extremely expensive program for widescale application throughout the Soviet Union. Some differential programs for rewarding selected workers may, however, be pursued to provide differential incentives. A particular problem is that of satisfying the requirements of the higher income groups, who can exercise choice in personal demand.¹²⁶

(e) *Growth acceleration as the general palliative.*—If the Soviet national income could be made to grow at the rate of 7 percent per annum that prevailed in the past decade, the decisions on resource allocations noted above would be less agonizing. The hope of the improvisers such as Kosygin or the orthodox “neo-Stalinist” economists such as Ostrovitianov seems to be that somehow the performance of the system will improve. Some growth stimulating forces are evident: labor shortages may be relaxed, agricultural weather is likely to improve, the new sectors may profit from the learning process, and problems in such industries as chemicals and petroleum refining may diminish. Likewise some improvement in the efficiency of planning is possible. It may even be that substantial changes could be made following the logic of Pareto optimality, namely that some claimants on resources could be better satisfied without hurting other claimants. Still, it appears that in the final analysis the hard choice of attacking the problem of institutional stagnation must be faced. If factors external and internal to Soviet plans do not bring back healthy growth, then the hard choice of changing the system may become an inevitable and central issue.

POLITICAL IMPLICATIONS OF ECONOMIC CHANGE

Changes in the role of the party and in Soviet society as a whole resulting from economic change may be more significant than the latter itself. If the economic change undertaken goes in the direction implied by the extreme variant in the Soviet search for a new pattern, involving the development of some flexible pricing and market mechanisms in the Soviet economy, then the type of decisions made by the party leadership and the type of people who make the decisions for the party may well change substantially. From Lenin's role in the development of the electrification plan of the RSFSR (GOELRO) in the 1920's to the convening of the Soviet Party Congress in 1966, the top leadership of the Soviet Party has maintained extensive and far-reaching control over the details of economic decisions in the Soviet Union. A transition from physical output planning to fiscal and monetary planning would allow the Soviet leaders to continue developing broad macroeconomic policies but would not permit them to make the same detailed microeconomic decisions on production levels as well as on final allocation of resources that has been characteristic of the Stalinist approach to economic development. The elite group of decisionmakers who influence the pattern and direction of Soviet economic development would thus be likely to be broadened to include more technically oriented, businessmen/economist-type leaders. In

¹²⁶ See Granick, *op. cit.*, especially pp. 109–127.

this context, a Soviet counterpart of our Director of the Bureau of the Budget would be delegated the kind of power previously reserved for the pinnacle of the political power structure in the Communist Party. This delegation of power within the Soviet political structure would be a significant change in the authoritarian state but would not be likely to represent a change which could be described in any meaningful sense as the emergence of a democratic process. The bulk of the population would not be likely to have any strong influence on the production and distribution processes through their demand for goods, nor would the investment program for the expansion of one or another sector of the economy be determined directly by the Soviet consumers' expression of choice in a form of market. The price of investment goods is not likely to be imputed by the scarcity of relevant consumer goods in a market within which consumers are in some meaningful way sovereign. Thus, the Soviet society would still be in a state of political serfdom as described by von Hayek.¹²⁷

One unknown factor which will condition the success of the economic reforms currently being enacted in the U.S.S.R. is the broad attitude toward them. Needless to say, one cannot speak of genuine public opinion as a factor in party policy, all the recent liberalization notwithstanding. However, there are some encouraging signs and the support or lack of it on the part of privileged groups—the rank and file of the party, government functionaries, scholars, the managerial elite, and artists—may well influence the future course of events.

The economic reforms announced by Kosygin at the September plenum of the Central Committee depart in one respect from all changes previously announced and enacted in the U.S.S.R. This time, practically all points of criticism of the current state of affairs and the remedies proposed by Kosygin were discussed in advance by economists and statisticians in newspaper articles and professional journals prior to enactment of the reforms. Compared with the past when changes were announced *ex cathedra* by the Central Committee or even the Presidium and then "discussed" or, more correctly, lauded, by the populace, this feature of the current reforms is indeed striking. In his report to the plenum, Kosygin all but quoted the Soviet proponents of change—Nemchinov, Aganbegian, Belkin, and Birman. This departure from past practice is so radical that it could not have escaped the attention of party controllers. In fact, V. Stepanov, the head of the Department of Propaganda and Agitation of the Central Committee and former chief editor of *Izvestia*, noted with a somewhat defensive air that "one of the present inept tricks of capitalist propaganda is an attempt to describe the current economic reforms as a result of the struggle of a group of economists opposed to the party line."¹²⁸

It is particularly difficult to analyze fully at this juncture the attitudes of different groups in the U.S.S.R. toward the reforms. We can only say that, on the one hand, the new school of economists, especially the young mathematically oriented ones, are doubtless pleased in general, albeit also probably somewhat disappointed in view of the ambiguities and procrastination in some aspects of the reforms. The

¹²⁷ "The Road to Serfdom," University of Chicago Press, 1944.

¹²⁸ *Ekonomicheskaja Gazeta*, No. 47, November 1965, p. 5.

bureaucrats of the party and state apparatus are, on the other hand, probably less than enthusiastic about the proposed changes. It may be recalled that the bulk of the opposition to the original Liberman proposals for greater decentralization came from party and state functionaries, as well as from the economists of the older school. When Liberman's proposals were tried out in several selected enterprises, some concern was voiced in the press that various government agencies, such as the Ministry of Finance, were not supporting the experiments. In an extremely revealing paper analyzing the announced reform, one of the most outspoken critics of the old system, Prof. A. Birman, noted that during the discussion prior to the reforms, many officials of planning, financial, and other economic agencies spoke against the proposed changes. Now, notes Birman, after the party and the government have enacted the reforms, the implementation is placed in the hands of these same officials. He, therefore, calls on them to "overcome the attitudes rejected by the reforms" and to assist in introducing the changes.¹²⁹ The power of the bureaucracy in the U.S.S.R. should not be underestimated and lack of support on the part of entrenched officials may well cripple the reforms, especially in view of the reluctance with which the more conservative elements in the party leadership have supported the reforms. It is also instructive to observe that in the implementation of similar economic reforms in Czechoslovakia and Yugoslavia the strongest opposition has come from party functionaries and bureaucrats.¹³⁰

Another imponderable in the future of the proposed changes is the specific behavior of the managerial group with their power elite. Even the small measure of independence given them by the reform is not necessarily welcomed by enterprise directors brought up in the Stalinist tradition. While the monetary incentives offered by the new system are attractive, negative sanctions for unsuccessful performance still play a major role in the U.S.S.R. Reluctance to innovate and aversion to risk-taking is typical of the Soviet managerial group, and it is difficult to envisage them as being overly enthusiastic about the new reforms.

The general public can probably be safely dismissed from consideration as it has very few, if any, outlets for its opinion or political means for affecting the success or failure of proposed changes. The prevalent attitude is probably one of general apathy and indifference. At the same time, the exhortations of a party propagandist, a former chief editor of Pravda, addressed to Soviet youth are very revealing. He regretfully notes that "it is not a secret that many are somewhat tired of reforms and that confidence in innovation has been undermined. Actually they are tired not of reforms per se but of the triumphal parade drums that have always accompanied reforms in the past * * *"¹³¹

If change of a significant nature is undertaken in the Soviet economy involving a substantial expansion of the minority group that con-

¹²⁹ A. Birman, in *Novyi Mir*, No. 12, 1965, p. 212.

¹³⁰ See for instance L. Pekarskii and S. Anufrienko, letter to the editor, *Komsomol'skaia Pravda*, June 3, 1965; *New York Times*, Feb. 26, 1966. In Yugoslavia, the recent purge of Rankovic and his associates is apparently related to party opposition to economic reform (see David Binder, in *New York Times*, July 10, 1966.)

¹³¹ A. M. Rumiants'ev, in *Iunost'*, No. 1, 1966, p. 67. Rumiants'ev is now head of a section at the Institute of World Economics and International Relations of the U.S.S.R. Academy of Sciences.

trols effective power and a change in the character of that minority from a primarily political orientation to a more technical economist/businessman character, this change might in itself engender other changes within the Soviet society.¹³²

What appears to be involved is a revision of the concept of democratic centralism, the guiding principle of decisionmaking by which the party develops policy and maintains discipline. As originally conceived by Lenin in 1903, it meant essentially that the members of the party would freely discuss the issues before a decision was made, but after resolution all were to adhere to the central party decision without factional dissent. As applied during the Stalinist era, the democratic aspect of this concept was muted at best, as illustrated in Nikita Khrushchev's de-Stalinization speech in 1956. He notes repeatedly the lack of allowable dissent or participation in decisions by even the minority elite that form the Communist Party in the Soviet Union. An outstanding example of this restrictive Stalinist application of democratic centralism in the formulation of economic policy was the discussion of the fifth 5-year plan. This apparently led to the elimination of the head of the state planning commission, Nikolai Voznesensky, who "perished physically" as a victim of the Stalinist "cult of personality."¹³³

Many changes have taken place since 1953 in the application of democratic centralism and in the formulation of economic policies and other matters. We may now perceive at least four groups within the elite who influence and constrain policy decisions in the Soviet Union and the party: the military; the economic planners/enterprise managers; the scientific group oriented around the physical sciences in the Academy of Sciences; and the party bureaucracy. The military have had perhaps the closest approximation to actual decisionmaking power within their own sphere of professional interest, but even their power in the post-Stalin period has fluctuated.¹³⁴ The new group of economists/managers, indicated above, appears to be approaching a position where it may constrain and influence policy on economic matters.

All of these professional elite groups below the top leadership have a common interest in achieving a greater delegation of power from the party core in the decisionmaking process. Each group can, presumably, agree that within the guidelines provided by the political leadership, policy can be more efficiently implemented by those trained professionally, formally or by experience, to understand the implications of alternative applications of party policy guidelines. At the same time, each will likewise tend to compete with the others for priority in policy decisions involving a share of limited resources to attain its particular ends. This is a conflict of interest which doubtless hampers their mutual quest for a broader delegation of power within the party guidelines of policy. And all of them—those within the elite groups and those at the pinnacle of party power itself—must be aware that the decisionmaking power desired may be diluted in the process of

¹³² Cf. John P. Hardt, in *St. Antony's Papers*, 1966, pp. 20-44.

¹³³ "Khrushchev's Secret Speech," in "The Anti-Stalin Campaign and International Communism: A Collection of Documents," edited by the Russian Institute, Columbia University, New York, 1956, p. 58.

¹³⁴ Louis Nemzer, "Conflicting Patterns of Civil-Military Relations in the U.S.S.R.," Research Analysis Corp., Technical Paper-142, May 1964.

implementation in each of these groups. There has been perceived a rising new generation of younger leaders who are in principle allied in the pursuit of a broader delegation of power or a more liberal interpretation of the rule of democratic centralism in Soviet party affairs.¹³⁵ For the economist/management group, the establishment of indirect controls in the economy would be an implied expression of this kind of delegation of power.

Moreover, the type of revolutionary economic change that appears to be required may endanger the vested interests of many of the present elite groups. To expect the Soviet society to change in an evolutionary way would appear to be un-Marxist and perhaps unrealistic. Truly effective consummation of the apparently necessary changes in the Soviet economy and the political structure within which it operates may take several decades, as it did in the United States in fully adopting a version of the Keynesian approach to fiscal and monetary policy appropriate to our problems in the Great Depression. In his recent Godkin lectures at Harvard, Walter Heller observed that, insofar as policies proposed and adopted are concerned, the Keynesian revolution was not really completed until 30 years after it was launched in 1936.¹³⁶

In the process, Soviet institutions may go through a gradual evolution, such as step-by-step adoption of effective economic theory, improved data collection, changes in personnel, and modification of institutions. However, it is also possible that the kind of gradual and evolutionary change which has characterized the American accommodation to a change in the nature of the institutional arrangements within which economic problems must be solved, is not likely or possible in the Soviet-type society. Therefore, if substantial changes do occur, they may occur rapidly and have far-reaching and immeasurable impacts on the whole fabric of the society. The Soviets used to claim that their system has discovered a law of change, a *zakonomernost'*. These claims of orderly controlled change have been singularly muted of late. And if the current quest for a new economic pattern takes concrete form it is likely to take them well beyond the dimensions anticipated by those who have unleashed the forces of change. The end result may well be a second economic revolution comparable in scope and depth to that launched by Stalin in the thirties.

¹³⁵ Vladimir G. Treml, in "Studies on the Soviet Union," vol. 5, No. 2, 1965, pp. 1-22.

¹³⁶ Washington Post, Mar. 27, 1966.

SOVIET PRICE THEORY AND POLICY

BY

MORRIS BORNSTEIN

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SOVIET PRICE THEORY AND POLICY *

SUMMARY

In the Soviet Union, as in all modern, complex economies, prices play an important part in the guidance of economic activity. However, their role in the Soviet economy is different both from their role in a capitalist market economy and from their role in the Socialist market economy described in the theoretical models of Lange, Taylor, and Lerner.¹ In the Soviet economy (and in the Soviet-type economies of Eastern Europe and Communist China), prices are not an autonomous force determining production, resource allocation, and consumption. Instead, prices are manipulated by the central authorities as one of various instruments intended to accomplish their planned goals.

Following a summary view of the various functions of prices in the Soviet economy, this paper deals in turn with the three major subsystems of the Soviet price system: industrial wholesale prices, agricultural procurement prices, and retail prices. The discussion focuses on current pricing practices, theoretical controversies among Soviet economists about price reforms, and pending changes in price policies. Because of space limitations, and in order to avoid duplication with other contributions to this compendium, certain types of prices—such as wages, transportation rates, and foreign trade prices—are not considered here. The paper also does not treat in any depth such aspects as the historical evolution of the price system in the 1930's and 1940's, narrowly technical aspects (such as the construction of price lists), or minor types of prices (such as those which collective farms charge their members).

CHAPTER I. ROLE OF PRICES IN THE SOVIET ECONOMY

The functions of the Soviet price system may be classified under three very broad headings: control and evaluation, allocation, and income distribution.²

CONTROL AND EVALUATION

Prices are used by the central planners to secure compliance by enterprise managers with the plans elaborated by the former, and to evaluate the performance of the managers in the execution of

*This paper is based in part on research supported by the Center for Russian Studies of the University of Michigan, whose assistance is gratefully acknowledged.

¹ Lange-Taylor 38 and Lerner 44. (In the footnotes of this paper, sources are cited by short titles consisting of the author and year of publication. Complete citations to sources appear in the alphabetical listing of references at the end of the paper.)

² Here and elsewhere in this paper I draw upon Bornstein 62. For a rather similar, though more complex, classification by a team of Soviet economists in the Price Formation Section of the Institute of Economics of the U.S.S.R. Academy of Sciences, see Diachenko 63, pp. 285-86.

their assigned tasks. Although resource allocation is determined by the planners largely in physical terms, it is necessary for them to express complex input and output targets for the enterprise in value terms in order to have a common denominator for physically dissimilar units of raw materials, labor, and capital goods. Thus the enterprise plan contains targets for the value of output, sales, cost, profits, tax payments, etc.

ALLOCATION

Although physical allocation by administrative commands predominates in the Soviet economy, prices do influence the allocation of resources, and thus the pattern of production, in various ways.

1. At the central planning level, prices are used to construct macro-economic balances, such as national product and intersectoral accounts, and capital-output ratios to supplement the basic physical planning tools. In addition, the relative pricing of substitutes may have some influence on the selection of technological coefficients for physical planning, as the planners substitute more abundant for scarcer materials during the successive iterations of the balancing process. Finally, project designers use value calculations in choosing among alternative variants of a given-output investment project and in assessing the benefits of modernization or innovation.

2. It is impossible for the central authorities to specify in complete detail the inputs and outputs of each enterprise. As a result, managers have a limited range of choice regarding both inputs and outputs. The relative prices of inputs and outputs influence the choices which managers make in trying to increase the value of output, sales, and profits.

3. Prices affect both the total supply of labor and its distribution. The state relies on low real wages, resulting from the relationship of money wages and consumer prices, to evoke a high rate of participation of the population in the labor force. Wage differences, in turn, are the principal means of securing the distribution of the labor force (by skill, industry, enterprise, and geographical location) desired by the planners.

4. In the collective farm sector, the central authorities use prices, along with delivery quotas, to influence the allocation of resources to certain crops and products in preference to others. (In addition, prices are used, along with delivery quotas, to stimulate total output, but in this case the aim is primarily to raise the productivity of given resources engaged in agriculture, by increasing real compensation and thus incentives.)

INCOME DISTRIBUTION

In the Soviet economy, the basis of income distribution is the "socialist" principle of unequal monetary compensation according to labor services rendered, rather than the "communist" principle of distribution according to need; and the promise of unequal monetary compensation is the basis of production incentives. The wage (i.e., price) system—together with transfer payments and income taxes—determines the distribution of (disposable) money income. The Soviet Government endeavors to make the distribution of real income

less unequal than the distribution of money income by two chief methods. One is a broad program of "free" health and education services financed from general budget revenues. The second is to fix relatively low prices for mass consumption goods and relatively high prices for luxury goods by means of differentiated turnover taxes. The distribution of real income is also made less unequal than the distribution of money income through the administrative allocation of housing and through the informal rationing of queues and empty shelves when retail prices are fixed below the market-clearing level.

CHAPTER II. INDUSTRIAL WHOLESALE PRICES

NATURE AND TRENDS

Industrial wholesale prices are those at which goods are transferred or evaluated within the state sector of the Soviet economy.³ The term covers prices of producer goods, including raw materials, semi-fabricates, and machinery, as well as manufactured consumer goods. It excludes prices at which agricultural products are obtained by the state from collective farms but includes prices at which procurement agencies sell agricultural products to state enterprises for processing or to trade organizations for retail sale without further processing. It also excludes foreign trade prices, although it includes the prices at which foreign trade organizations buy from and sell to Soviet enterprises. Since 1958, collective farms have been permitted to buy various producer goods at wholesale prices, rather than at retail prices, as previously.

The Soviet industrial wholesale price system is composed of three types of prices. The enterprise wholesale price (*optovaia tsena predpriatia*) is the price at which a producing enterprise sells its output. The industry (i.e., branch of industry) wholesale price (*optovaia tsena promyshlennosti*) is paid by the state-enterprise buyer and includes, in addition to the enterprise wholesale price, (1) the turnover tax, if any, on the product; (2) the markup of the branch sales organization; and (3) transportation charges if these are borne by the sales organization rather than the buyer. Finally, a settlement or accounting price (*raschetnaia tsena*) is used in some branches where production costs diverge widely, notably the extractive branches. Individual enterprises or groups of enterprises receive different settlement prices, rather than a single, uniform enterprise wholesale price, from the branch sales organization. The latter, however, sells to customers of the branch at a single industry wholesale price.

Enterprise wholesale prices are composed of the planned branch average cost of production (*sebestoimost'*) and a profit markup. The former has no exact equivalent in Western cost accounting. It includes direct and indirect labor, materials (including fuel and power), depreciation allowances, and various overhead expenses. Although interest payments for short-term bank loans are included, both rent and interest on capital are excluded. The profit markup is supposed to provide a "normal" profit, for the branch as a whole, of 5 to 10 percent,

³ Bornstein 62, p. 69, and Bornstein 64, pp. 18-19.

calculated in relation to sebestoimost'. This profit markup is not intended to allocate resources among alternative uses, but rather is to provide a source of "net income" (chisty dokhod) or accumulation to the state, to serve as an instrument of financial control, and to promote the "businesslike" operation of Soviet enterprises.

Another source of accumulation is the turnover tax, which is levied primarily on consumer goods and included in the wholesale prices of the light and food industries, and thereby in retail prices. As a result, there is a great disparity between producer and consumer goods in the relationship between their "costs" and their wholesale prices. In 1964, for example, in heavy industry, production and marketing costs accounted for 81.6 percent of the value of output in industry wholesale prices; profit, 11.5 percent; and turnover taxes, 6.9 percent. In contrast, the corresponding figures for the light and food industry branches were 66.5, 8.2, and 25.3 percent.⁴

The main trends in Soviet industrial wholesale prices from 1949 to 1964 are shown in tables 1 and 2. In the price reform of January 1, 1949, heavy industry prices were raised sharply (on the average by 58 percent above the 1948 level) to eliminate most subsidies and to remove the turnover tax from all producer goods except electric power, natural gas, and petroleum products.⁵ As a result of subsequent cost reductions, heavy industry prices were later reduced through comprehensive price revisions in 1950, 1952, and 1955, and through more limited adjustments in particular industries since 1958. Changes since 1958 include reductions in the prices of electric power, machinery, and petroleum products, and a sharp increase in timber prices. In the case of electric power, turnover taxes were approximately doubled in 1961, reducing enterprise wholesale prices (table 1) while leaving industry wholesale prices (table 2) unchanged.

TABLE 1.—*Indexes of Soviet industrial prices: Enterprise wholesale prices (excluding turnover tax), selected years, 1950-64*

[1949 = 100]

Commodity group	1950	1952	1955	1958	1962	1963	1964
All industrial production.....	83	72	68	67	71	71	71
Heavy industry.....	80	68	61	58	57	57	57
Chemical industry.....	84	76	67	67	67	67	67
Ferrous metallurgy.....	71	63	60	60	60	60	60
Coal industry.....	100	91	84	84	84	84	84
Petroleum refining.....	85	72	65	65	63	63	63
Electric power.....	92	82	74	70	61	60	60
Machine building and metalworking.....	76	60	52	45	44	43	42
Timber industry.....	85	85	85	107	107	107	107
Cellulose and paper industry.....	81	68	65	65	65	65	65
Construction materials industry.....	82	67	57	57	57	57	57
Light and food industry.....	91	82	86	93	110	112	112
Light industry.....	91	83	80	80	81	83	83
Food industry.....	91	81	91	104	135	137	137

Sources: Nar. khoz. 62, p. 144; Nar. khoz. 63, p. 136; Nar. khoz. 64, p. 154.

⁴ Nar. khoz. 64, p. 156.

⁵ Belorusov 65, p. 12.

TABLE 2.—*Indexes of Soviet industrial prices: Industry wholesale prices (including turnover tax), selected years, 1950-64*

[1949=100]

Commodity group	1950	1952	1955	1958	1962	1963	1964
All industrial production.....	80	69	61	60	61	61	61
Heavy industry.....	80	68	61	59	59	59	58
Chemical industry.....	84	76	67	67	67	67	67
Ferrous metallurgy.....	71	64	60	60	60	60	60
Coal industry.....	100	91	84	84	84	84	84
Petroleum refining.....	85	72	65	72	66	66	66
Electric power.....	92	82	74	70	70	70	70
Machine building and metalworking.....	76	61	52	45	45	45	45
Timber industry.....	85	85	85	107	107	107	107
Cellulose and paper industry.....	81	68	65	65	65	65	65
Construction materials industry.....	79	67	57	57	57	57	57
Light and food industry.....	80	70	59	61	61	61	62
Light industry.....	88	88	70	70	70	70	70
Food industry.....	77	62	54	57	59	59	59

Sources: Nar. khoz. 62, p. 145; Nar. khoz. 63, p. 137; Nar. khoz. 64, p. 155.

In the food industry, enterprise wholesale prices (table 1) have been raised several times since 1952 to cover higher costs from successive increases in agricultural procurement prices. Industry wholesale prices (table 2) do not show a corresponding rise, however, because these cost increases have been largely offset by reductions in turnover taxes, intended to prevent the higher agricultural procurement prices from affecting industry wholesale prices and thus retail prices.

PRICE-REFORM DISCUSSION

In the lengthy discussion on price reform which began in 1956, Soviet economists have criticized the industrial price system on various counts and have advanced different proposals for price reform.⁶

Criticisms

The chief criticisms include the following:

1. Many Soviet economists believe that producer goods prices do not properly reflect their "values," in the Marxian sense of the term. In Marxian value theory it is possible for the actual prices of commodities, whether determined by market forces or administratively, to differ ("deviate") from their values, which in a long-run, "normal" sense are regarded as determined by the amount of past and present socially necessary labor embodied in them. ("Socially necessary" labor is the amount used with average skill, intensity of work, and conditions of production.) According to Marxian value theory, the value (stoimost' in Russian) of a commodity is regarded as composed of three parts: (a) the value of past labor embodied in the materials and that portion of plant and equipment (as measured by depreciation charges) used up in producing the commodity; (b) the value of current labor for which workers receive compensation in the form of wages; and (c) the value of current labor for which workers are not compensated ("surplus value" or "surplus product"). In Marxian terminology, these components of value are designated respectively *c* for constant capital, *v* for variable capital, and *m* (or *s*) for *mehrwert* (or surplus value or product).

⁶ Bornstein 64.

In applying this value= $c+v+m$ formula to the Soviet economy, Soviet economists usually take 'sebestoimost'' as equivalent to the sum of c and v , and they regard the sum of total profits and turnover taxes as equal to total surplus product or aggregate m . One criticism of industrial price formation is that, because (as noted above) prices of producer goods contain significantly less profits and turnover taxes (m) in relation to 'sebestoimost'' ($c+v$) than do prices of consumer goods, producer goods as a group are "priced below their value." In addition, this criticism asserts, because surplus value is not properly distributed in the prices of different commodities, relative prices of producer goods do not correspond to their relative values. That is, both the level and the structure of producer goods prices are held to deviate from their Marxian value.

2. In turn, because producer goods prices fail to correspond to their values, either in some aggregate sense or relative to each other, they furnish unreliable guides for choices by planners and enterprise managers. If relative prices are not correct, then incorrect choices will be made regarding alternative inputs and outputs. Because producer goods as a group are considered underpriced relative to consumer goods, in the calculation of production expenses both materials and machinery are undervalued relative to labor—whose wage rates are related to the price level of consumer goods—leading to the unjustified substitution of materials and machinery for labor. Similarly, the shortcomings of producer goods prices distort the comparisons of internal and external prices on imports and exports which are made in planning foreign trade.

3. The defects of industrial wholesale prices impede the effective use of value targets in the control and evaluation of enterprise operations. For example, they cause differences in the level or rate of profits (or losses) which are unrelated to the performance of enterprises or their contribution to the economy.

4. Soviet economists agree that this scheme of industrial pricing causes part of the value created in producer goods branches of industry to be "realized" in the prices of consumer goods. Thus, the calculation of various macroeconomic relationships using these prices does not give an accurate picture of the structure and development of the economy. For instance, the share of heavy industry is understated in the distribution of national income by sector of origin, while the share of accumulation (i.e., investment) is understated relative to consumption in the distribution of national product.

Reform proposals

On the issue of what reforms should be made in the industrial price system, Soviet economists are divided into three main schools: a traditionalist school, a surplus product markup school, and an opportunity cost school.

1. *Traditionalist school.*—One group upholds the essentials of the traditional scheme of industrial price formation but suggests relatively modest adjustments in order to improve the structure of producer goods prices without altering their level significantly. It believes that the use of prices as instruments of economic control requires many deviations of price from "value," in order to promote the

efficient operation of enterprises, recognize supply and demand factors in certain cases, promote or discourage consumption of certain goods, etc. The traditionalists see no justification for a large increase in the overall level of producer goods prices to incorporate more "surplus product" in them. Instead, they stress selective adjustments in the structure of producer goods prices to eliminate losses and excessive profits, establish the "correct" price relationships between substitutes, encourage the introduction of new models of machinery, etc.

2. *Surplus product markup school.*—Another group of Soviet economists favors pricing on the basis of "value" by adding a uniform, proportional surplus product (m) markup to *sebestoimost'* ($c+v$) to derive a price equal to value (i.e., to the sum of $c+v+m$). They propose to raise the level of wholesale prices of producer goods without altering the general level of wholesale prices (or retail prices) of consumer goods. This would be accomplished by a partial shift of surplus product (profits and turnover taxes) from consumer goods prices to producer goods prices in order to raise the latter relative to the former.

The members of this school differ among themselves, however, on the manner in which surplus product should be distributed in the prices of goods. One view favors using labor cost as the base to which the markup would be applied; a second, *sebestoimost'*; a third, capital; and the fourth, a combination of labor cost and capital. Each of these will be discussed briefly in turn.

(a) The most orthodox position advocates relating the surplus product markup to labor cost—i.e., the wage bill—in order to obtain prices that are truly based on "labor value" (*trudovaia stoimost'*). It proposes a uniform surplus product markup related to the wage bill, according to the following formula:

$$p = c + v + v \frac{M}{V} = c + v \left(1 + \frac{M}{V} \right) \quad (1)$$

where p represents the price of a commodity, c the branch average materials costs (including also depreciation charges) per unit of the commodity, v the branch average wage cost per unit of the commodity, M the total surplus value to be distributed among goods, and V the total wage bill for workers engaged in "material production." The prices of the material inputs (and capital equipment to be depreciated) in c would themselves be calculated in the same way.

(b) Another formula relates the markup to total *sebestoimost'* ($c+v$) rather than to labor cost (v) alone. With p , c , v , M , and V defined as before and C representing the total materials cost (including also depreciation) of aggregate "material production,"

$$p = c + v + (c + v) \frac{M}{C + V} = (c + v) \left(1 + \frac{M}{C + V} \right) \quad (2)$$

This formula resembles the traditional price-setting practice in relating the surplus product markup to *sebestoimost'*, but it differs from it in calling for the uniform application of the same percentage markup to all producer and consumer goods.

(c) A third position relates the markup to capital. With p , c , v , and M defined as before and k representing the average amounts of fixed and working capital per unit of the commodity and K the total fixed and working capital used in "material production," the corresponding formula is

$$p = c + v + k \frac{M}{K} \quad (3)$$

The supporters of this position hold that the magnitude of surplus product depends not only on the quantity of live labor used in production but also on its productivity, which in turn depends on the capital with which it is equipped. They believe that capital investment should be reflected in prices in order to promote the economization of capital in choices between more and less capital-intensive goods and methods of production. Likewise, enterprises should pay capital charges to the State, because such charges would lead them to request less fixed and working capital and to use more effectively the capital they have.

(d) A fourth position, which has evolved in the past few years, offers a compromise between the first and third formulas, by relating part of the surplus product markup to labor cost and part to capital. According to this position, with p , c , v , k , and K defined as before and M_1 representing the part of surplus value to be distributed in proportion to the wage bill and M_2 the part of surplus value to be distributed in proportion to capital,

$$p = c + v \left(1 + \frac{M_1}{V}\right) + k \frac{M_2}{K} \quad (4)$$

It is suggested that M_1 correspond to the portion of the total "surplus product" devoted to "social-cultural expenditures" (health, education, and social welfare measures) and that M_2 correspond to the portion devoted to investment, defense, and general administration. In some variants of the formula, an additional price-forming element D is added to include differential rent on natural resources. Also, some proponents favor a single rate for the capital charge M_2/K , while others prefer a charge differentiated by branches of industry according to the structure of capital and the rate on return of capital.⁷

It should be noted that all of these formulas are cost-oriented, neglecting demand as a basic element in value and price. They do not recognize a connection between value and allocation. The allocation of resources would still be accomplished by directives in physical terms, supplemented by selected divergences of price from the "value" result yielded by the particular formula—for example, in order to secure the correct relative price structure for substitute fuels or machines.⁸

3. *Opportunity cost school.*—The members of this school, in contrast, advocate, explicitly or implicitly, efficiency prices which reflect relative scarcities and include capital and rent charges. These prices

⁷ A. A. Stepankov, "Obshchestvenno neobkhodimye zatraty truda kak osnova tsenoobrazovaniya" (Socially Necessary Labor Costs as the Basis of Price Formation) in Diachenko 63, pp. 86-88; and Diachenko 65.

⁸ For a calculation, using the 1959 input-output table, of the impact of the adoption of the different surplus product markup formulas on the level and structure of industrial wholesale prices, see Belkin 63.

would, ideally, be the shadow prices obtained from the formulation of an "optimum" plan by input-output and other mathematical programming techniques. Such an optimum plan would achieve as fully and as efficiently as possible a set of final output goals specified by the political leadership. The members of this school recognize that such a plan, and its shadow prices, cannot be formulated at present, because of the absence of the necessary detailed information on many millions of economic relationships and the lack of the necessary data processing and computing facilities to handle this information if it did exist. However, they believe that it is still possible at present to improve the existing price system by incorporating, if only imperfectly, some of the features of the ideal prices of the optimum plan.

The advocates of this approach—particularly V. V. Novozhilov and L. V. Kantorovich—have been attacked on the ground that they reject the Marxian labor theory of value by recognizing land and capital as factors of production, relating value to scarcity, and using the "notorious" bourgeois marginal analysis. However, Novozhilov and Kantorovich steadfastly deny any deviation from Marxian value theory, asserting that their prices are different from capitalist prices, that land and capital are considered only insofar as they affect the productivity of labor, etc.

PENDING CHANGES

1961-64 price revision

The July 1960 Plenum of the Central Committee of the CPSU called for a revision of heavy industry prices and freight rates during 1961-62, with the aim of introducing the new prices in 1963. The main features of the revision, as disclosed while the work was in progress, indicated that it would conform to the views of the traditionalist school.

The principal objective was to adjust prices and costs (i.e., sebestoimost') in heavy industry to provide a "normal" level of profitability, in relation to sebestoimost', of about 9 percent. The general level of wholesale prices for heavy industry was to remain virtually unchanged, being reduced by only about 3 percent. However, the structure of heavy industry prices was to be altered markedly, by price increases in most extractive branches and price reductions in the secondary branches, such as machine building and chemicals. The revision thus sought to recognize and ratify wage and cost increases in the extractive branches, on the one hand, and productivity gains and cost reductions in the manufacturing branches, on the other, since the last general price revision in 1955. In some cases (e.g., coal and petroleum), relative prices of substitutes were to be changed to adjust demands on the part of users to the planned supplies. The effects of the producer goods price revision on other sectors of the price system—such as wholesale prices of consumer goods, agricultural procurement prices, and retail prices—were to be negligible.⁹

Work on the price revision was not completed on schedule, however, because of the huge volume and great complexity of the work. One source estimates that the total volume of price lists amounted to 38,400 printed pages, containing several million prices.¹⁰ By the end

⁹ Bornstein 63.

¹⁰ "Before the compilers of price lists stands a very difficult task—in a comparatively short period of time to cope with an army of many million figures." Stollarov 63, pp. 33-34.

of 1962, price lists had been completed for raw materials and fuels, chemicals, construction materials, and electric power, but not for machine building,¹¹ in which, because of technological developments, some 40 percent of the entries in the price lists were new items.¹² Nevertheless, it appears that by late 1963 or early 1964 the new price lists were ready, as instructions were issued in June 1964 to recalculate the 1964 plan and budget in the new prices, as a basis for calculating the 1966 plan and budget and the 5-year plan for 1966-70 in the new prices.¹³

On the basis of the new heavy industry prices, a revision of wholesale prices on the output of the light and food industries was undertaken in 1964. It affected about 85 percent of light industry output but only about 30 percent of food industry output, because wholesale prices on many food products had already been adjusted in response to the successive increases in agricultural procurement prices since 1953. Thus, the revision affected all segments of the textile, knitwear, and leather and rubber footwear industries, but not bread products, meat, fish, butter, sugar, tobacco, or canned vegetables. One aim of the revision was to adjust prices for changes in production costs (including the cost of heavy industry inputs, such as synthetic fibers from the chemical industry). Another objective was to reduce the large variations in the profitability of different items within the same product categories (e.g., different types of clothing or footwear), and thus to curb the tendency of enterprises to "violate the assortment plan" by producing more of the "advantageous" and less of the "disadvantageous" items than called for in the plan. A third goal was to reduce the number of enterprises operating at a loss. Finally, the revision was supposed to simplify price lists by eliminating out-of-date items and low-quality goods not in demand. The revision was not to lead to any increase in the level of retail prices.¹⁴

The actual promulgation of the new heavy industry price lists was successively postponed, however. According to S. G. Stoliaroy, Chief of the Department of Price Statistics of the Central Statistical Administration, one reason was the opposition of critics of the traditional scheme of price formation, particularly those who favored the surplus product markup approach instead.¹⁵ After the ouster of Khrushchev in October 1964, the adoption of new prices was delayed while the new leadership formulated its economic program, including the decisions on economic planning and management announced in Kosygin's speech to the Central Committee on September 27, 1965.

1966-67 price reform

According to this speech,¹⁶ the Soviet Government plans to introduce by the beginning of 1968 a number of important changes: (1) Sales and profitability, rather than total output, will be the principal enterprise performance indicators. (2) Enterprises will receive somewhat greater freedom in determining the composition of their output and inputs. (3) To economize on capital, enterprises will be required to pay

¹¹ Stollarov 63, p. 40.

¹² Belorousov 65, p. 28.

¹³ It was reported that 157 all-union price lists and more than 600 republic price lists were prepared by mid-1964. Regional construction cost estimate price lists were to be issued by the end of 1964. Lakhova 64, p. 5.

¹⁴ Kabko 64 and Belorousov 65, pp. 128-131.

¹⁵ Stoliarov 63, pp. 192-93.

¹⁶ Kosygin 65.

interest on their fixed and working capital, their profitability will be calculated in relation to capital rather than cost, and new investment will be financed in large part from bank credits instead of budget grants. (4) Enterprises will retain a larger share of their profits for investment and the payment of bonuses to both workers and management. (5) The regional economic councils created in 1957 will be replaced by ministries for the different branches of industry.

Kosygin called for a revision of industrial prices to implement the new scheme of planning and management, indicating the following guidelines for price reform:

1. "Prices should to the greatest degree reflect socially necessary labor costs and must cover the costs of production and distribution and insure the receipt of profits by each normally operating enterprise."

2. From the sale of its output, the normally operating enterprise should receive enough profit to make payments on its assets and other payments into the budget, build up incentive funds, and expand its capital.

3. Enterprise payments to the budget of a percentage charge on fixed and working capital are not to be in addition to previous payments to the budget but rather are to replace in part payments made in the form of profits taxes and turnover taxes, whose share in enterprise payments to the budget will be reduced.

4. Prices should also take into account the quality, durability, and reliability of products and "the economic effect" obtained by consumers.

5. Industrial wholesale price revisions should not result in a change in retail prices.

A State Price Committee (SPC), under U.S.S.R. Gosplan, was established¹⁷ to prepare, by the beginning of 1966, recommendations on the main features of a system of wholesale prices, "proceeding from the necessity of bringing prices closer to the level of socially necessary labor costs. These prices should assure the achievement of the indicated measures for improving planning and economic incentives for enterprises." Recognizing that the actual calculation of new prices and preparation of new price lists would require much more time, Kosygin called for the introduction of new prices in 1967-68, or possibly earlier in certain parts of industry.

According to the chairman of the SPC, V. Sitnin, the main features of the new industrial wholesale prices will be as follows:¹⁸

1. Prices will be based on average branch sebestoimost', rather than marginal cost, and planned losses will still be possible in those enterprises whose costs are much above the branch average.

2. Profitability will be calculated in relation to fixed and working capital. Profit rates will be high enough to cover investment for expansion, payments to the budget equal to 5-6 percent of capital, and contributions to incentive funds.¹⁹ The average rate of profitability

¹⁷ It absorbed two existing bodies, the Commission on Prices of the Presidium of the U.S.S.R. Council of Ministers and the Price Bureau of U.S.S.R. Gosplan. Its functions are listed in "Ob obrazovanii Gosudarstvennogo komiteta tsen pri Gosplane SSSR" (On the Formation of the State Price Committee Attached to U.S.S.R. Gosplan), *Finansy SSSR*, No. 11, 1965, p. 93.

¹⁸ Sitnin 66.

¹⁹ For 1966 the capital charge is fixed temporarily at 6 percent, compared to 1-2 percent for short-term credit and 0.5 percent for long-term credit for capital investment, according to *Metodicheskie ukazania* 66, p. 35. Some Soviet economists favor differentiating the capital charge by branches, or even enterprises, and by types of capital. See Aleksandrov 65, pp. 17-20; Kisman 65, pp. 9-11; Sitarian 65, pp. 37-39; and Vinokur 65, pp. 50-51.

for industry as a whole is estimated at approximately 12–15 percent, but rates will vary by branch of industry. (The uniform surplus product markup approach is specifically rejected by Sitnin.) For example, in heavy industry, in order to cover costs in the coal industry and at the same time secure the proper relative prices for substitute fuels, accumulation (in the form of both profits and turnover taxes) must be higher in the petroleum and gas industries than in the coal industry. In light industry, accumulation (particularly in the form of turnover taxes) will be higher on alcoholic beverages and tobacco than meat.

3. In the extractive industries two methods will be used to deal with large differences in costs due to natural conditions. In some cases, group settlement prices will be used, as at present. In others, enterprises in more favorable natural conditions will make fixed rent payments.

4. Greater use is to be made of increments to prices to reflect quality and durability features.

5. The revision of industrial wholesale prices is not to raise the level of retail prices or to alter their structure significantly. Also, it is not to modify significantly the prices on industrial producer goods sold to agriculture, in order not to affect the terms of trade for agriculture established by the March 1965 and other agricultural measures taken by the post-Khrushchev leadership.

The actual revision of individual prices along these lines is now underway. It is expected that new wholesale prices will be adopted in the textile industry on October 1, 1966; in the footwear industry on January 1, 1967; in machine building, metallurgy, chemicals, and electric power on July 1, 1967; and in all remaining branches by January 1, 1968, when the changeover to the new scheme of economic planning and management is to be completed.²⁰ So far, however, detailed information on the new prices has not been published.

Nevertheless, on the basis of the information available to date, it appears that the new wholesale prices will to a large extent follow traditional lines, rather than those recommended by either the surplus product markup school or the opportunity cost school. Although the new prices are to include a capital charge, the 5–6 percent rate chosen is neither the M/K rate recommended by surplus product markup formula number (3),²¹ nor the kind of scarcity charge for capital advocated by the opportunity cost school. Instead, the capital charge seems to be intended, in the words of one Soviet economist, “not as a price-forming factor but as a form of redistribution of profit.”²²

In other respects, the principles underlying the new prices appear to differ little from those used (in 1955) in preparation of the existing prices and those followed in the 1961–64 revision. The new prices are to be based on average cost rather than marginal cost. They attempt to provide a “normal” level of profitability (defined in a new way, to be sure) to the normally operating enterprise fulfilling its plan. With the exception of relative prices of some substitutes (e.g., fuels), however, they are not intended to be scarcity prices capable of allocating

²⁰ Bachurin 66 and “*Ekonomicheskie obosnovannye tseny*” (Economically Based Prices). *Izvestia*, Feb. 8, 1966, p. 3.

²¹ Belkin 63, p. 228, uses 17.3 percent and Belorusev 65, p. 170, uses 20 percent in calculating prices according to formula number (3).

²² Sitarian 65, p. 37.

resources in the most efficient way. It is questionable, therefore, whether the new prices will contribute much to improving the choices which enterprise managers, exercising their expanded decisionmaking powers, will make regarding current inputs and outputs and investment. Nor are they likely to enhance the ability of higher administrative authorities to evaluate enterprise performance. Rather, it appears that the reform of industrial prices is not as bold as would be required to carry out successfully the changes in planning, management, and incentives which it is supposed to help implement.

CHAPTER III. AGRICULTURAL PROCUREMENT PRICES

Agricultural procurement prices are those at which collective and state farms sell to state procurement agencies. Collective farm market prices, at which agricultural producers sell to households, are analyzed in the following section on retail prices.

NATURE AND TRENDS

Collective farm prices

In setting procurement prices for collective farms, the Soviet Government has pursued two conflicting objectives: (1) to fix the terms of trade for the collective farm peasantry so as to make it bear a large share of the burden of industrialization, and (2) to provide incentives to produce. The former objective clearly dominated during the Stalin era. Since 1953, the latter has been more characteristic of collective farm price policy.

The terms of trade and real income of the peasantry depend on the relationship between agricultural procurement prices paid to the collective farms, on the one hand, and prices paid by collective farms for material inputs and prices paid by collective farmers for consumer goods, on the other. The terms of trade for the peasantry were extremely unfavorable during the Stalin era. Procurement prices for grain remained almost unchanged from 1929 to 1953. Livestock prices doubled from 1929 to 1940 but remained unaltered from 1940 to 1953. Over the same period, retail prices (at which collective farms also bought many of their industrial inputs) rose many fold. In 1952, the level of retail prices was 10 times the 1940 level. Grain and livestock production was very unprofitable, and the price of potatoes did not even cover the cost of delivery to the city. For technical crops, such as cotton, sugarbeets, and tobacco, the situation was more favorable, as procurement price increases after 1940 had kept pace with increases in the prices of consumer goods and industrial inputs.²³

One of the first steps taken by Stalin's successors in 1953 was to embark on a broad program to increase agricultural output, involving changes in planning and administration, delivery obligations, taxes, investment, and prices. The changes in agricultural procurement prices included a large increase in the general level of prices, regional differentiation of prices, a revision in the relative price structure in

²³ On trends in prices and terms of trade from 1928 to 1953, see Malafeev 64, pp. 266-69; Karcz 57; and Nimitz 59, pp. 249-55. On potato prices, Stollarov 63, p. 61. For an accurate picture of the peasantry's terms of trade one must, of course, also consider trends in prices on collective farm market sales, which account for an important share of the incomes of producers of meat, milk, eggs, fruits, and vegetables.

favor of food crops, a greater effort to relate prices to costs, and the unification of multiple prices into single procurement prices for each crop. Major price increases were made in 1953, 1956, 1958, 1962, 1963, and 1965. Table 3 shows the trend of collective farm procurement prices from 1952 to 1962. More recent data unfortunately are not available.

In 1953 the Government increased sharply both obligatory delivery prices (*tseny obiazatel'nykh postavok*) and state purchase prices (*tseny gosudarstvennykh zakupok*). The former applied to the delivery quotas fixed for each farm, and the latter to additional sales to the state above the quota. Although state purchase prices were higher than obligatory delivery prices, they were still below collective farm market prices, and hence sales at state purchase prices were in most cases not voluntary but compulsory. In addition to increasing both types of prices, the Government further raised average realized prices on vegetables and potatoes by reducing obligatory delivery quotas, thereby releasing more of their output for sale at the higher state purchase and collective farm market prices. In 1956, procurement prices were again increased, and in some cases the differential between the basic and the higher incentive price was reduced.

TABLE 3.—*Indexes of Soviet agricultural procurement prices, selected years, 1953-62*¹

[1952=100]

Commodity group	1953	1954	1955	1956	1958	1962 ²
All agricultural products.....	154	207	209	251	296	332
Grain ³	236	739	553	634	695	843
Technical crops ⁴	115	111	117	147	143	143
Sunflowers.....	528	626	987	928	774	848
Fruits ⁵	119	135	138	192	179	167
Potatoes.....	316	369	368	814	789	1,043
Cattle.....	385	579	585	665	1,175	1,523
Milk.....	202	289	303	334	404	434
Eggs.....	126	135	152	155	297	339
Wool.....	107	146	158	246	352	346

¹ Average state procurement-purchase prices on agricultural products procured from collective farms and private plots.

² Preliminary data.

³ Wheat, rye, barley, oats, maize, millet, buckwheat, and rice.

⁴ Raw cotton, flax fiber, hemp fiber, sugarbeets, and tobacco.

⁵ Including wine grapes.

Source: Stollarov 63, p. 106.

Prices were again changed in 1958, when multiple pricing was replaced by a single state purchase price for each product. Concurrently, the machine-tractor stations (MTS's) were abolished and their machinery sold to the collective farms. For the first time, prices of all crops were revised at the same time—providing an opportunity for a comprehensive adjustment of relative prices. However, the new prices could not be accurately related to costs (even if this had been intended) because of a lack of appropriate cost data. For decades, as long as average procurement prices were extremely low, reference to costs was politically inexpedient, and collective farms did not calculate their production costs. The notion was even widely accepted that the concept of cost was not applicable to collective farms. Only in 1955 did the state begin to investigate the level and structure of collective farm costs, and only in 1958 did farms begin to calculate

their costs.²⁴ The 1958 prices were therefore not based on costs. Instead they were set on the principle that the total bill to the state for procurements from the collective farms should not exceed the previous bill for procurements plus the bill for MTS operations and investment. Thus, basically, the existing terms of trade between the agricultural and industrial sectors were left unchanged; as one Soviet economist put it, "only the channels of exchange were altered."²⁵

In the case of livestock products, it was not intended that the 1958 prices should cover costs. Instead it was "supposed" that collective farm losses on livestock products would be covered from earnings on grain, sunflowers, and other crops. The ratio of prices to costs in 1960, for example, was 155 percent for grain (excluding corn), but only 65–67 percent for meat and eggs and 86 percent for milk.²⁶ This relative price-cost structure provided little incentive to collective farms to increase livestock production, and they instead emphasized the more profitable plant crops. In 1962, the Government raised purchase prices on cattle and poultry by an average of 35 percent. It also took the politically unpopular step of raising retail prices of meat products by an average of 30 percent and of butter by 25 percent. However, despite the substantial increase in livestock prices, they still failed to cover costs. As table 4 shows, the average 1963 purchase prices for milk, cattle, and pigs were well below their respective average 1961–63 production costs. Moreover, in many regions the price-cost discrepancy was greater than the national averages in table 4. (The table also reflects the impact of price increases in 1963 on cotton, sugarbeets, beans and peas, and potatoes.)

TABLE 4.—*Soviet collective farms: Average 1961–63 production costs¹ and average 1963 purchase prices of selected commodities*

Commodity	Average 1961–63 production cost (rubles per ton)	Average 1963 purchase price (rubles per ton)	Ratio of average 1963 price to average 1961–63 cost (percent)
Grain ²	45	86	191
Potatoes.....	43	72	167
Sugarbeets.....	18	29	161
Raw cotton.....	243	399	164
Milk.....	147	122	83
Cattle ³	967	781	81
Pigs ³	1,319	1,004	76
Sheep ³	543	538	99
Wool.....	2,545	3,797	149

¹ *Sebestoimost'*, including collective farm labor costs valued at state farm labor norms and wage rates.

² Excluding corn.

³ Weight gain.

Source: Khlebnikov 65, p. 39.

²⁴ The calculation of collective farm costs was, furthermore, complicated by the question of how to value labor inputs, which were reckoned not in money wage payments or even man-days, but in labor-day (*trudodni*) accounting units. The payments made in money and in kind per labor-day varied widely from one farm to another, and from year to year on the same farm. Moreover, since payments for a labor-day were greater on the more successful farms, to use actual labor-day payments would make it appear that the more efficient farms had higher costs. For purposes of comparison, therefore, it was decided to assign a fixed notional value to collective farm labor inputs; namely, to value them at state farm wage rates. Some Soviet economists, however, favor valuation of collective farm labor inputs at actual labor-day payments. See Nimitz 59, pp. 256–57; Durgin 64, pp. 389–91; and Karnaukhova 64.

²⁵ Lukinov 64, p. 163. Romanchenko 65, p. 12, asserts that the 1958 prices took into account only state expenditures on the current operations of the MTS's, excluding state investment in MTS's.

²⁶ Khlebnikov 62, p. 53. In these figures collective farm labor inputs are valued at state farm wage rates.

In 1965, as part of the broad Brezhnev-Kosygin agricultural program, prices for milk, livestock, and grain were raised, and above-quota premium prices were reestablished for wheat and rye, cotton, and sunflowers.²⁷ Data are not yet available to permit a precise assessment of the magnitude of the price increases and the resulting price-cost relationships for 1965. It appears, however, that the milk and livestock price increase will go a long way toward eliminating losses on these products on farms of average efficiency. They may even make livestock products profitable for collective (and state) farms as a whole.²⁸ In the case of grain, prices should cover costs in the main producing areas, though not on high-cost farms in the marginal areas. The increases in prices for technical crops should further stimulate their output.

In addition to these changes since 1953 in the level and structure of procurement prices, the terms of trade of collective farm agriculture have been improved through reductions in the prices of industrial inputs and in the prices of consumer goods sold to the peasantry. Until 1958, machinery, trucks, spare parts, and fuel were available to collective farms only at retail prices, while state farms bought these goods at much lower wholesale prices. In 1958, uniform wholesale prices for state and collective farms were established on trucks, machinery, and spare parts. But this concession was offset, at least in part, by an unpublicized increase in the same year in the wholesale prices of farm machinery and spare parts and in the retail price of gasoline.²⁹ This measure was reversed in 1961, when the Government reduced retail prices on gasoline and wholesale prices on trucks, machinery, and spare parts. In 1962 it authorized collective farms to buy construction materials at wholesale, rather than retail, prices.³⁰ Prices of trucks, farm machinery, and spare parts were again reduced at the beginning of 1966.

Though no precise calculations are available, it is evident that successive increases in agricultural procurement prices, together with adjustments in prices of industrial inputs and of consumer goods, have markedly improved the collective farm peasantry's terms of trade since 1953. The general price increases from 1953 to 1958 helped, in conjunction with other measures, to bring about a large increase in agricultural output. Subsequent price increases have been more selective, focusing on lagging commodities, particularly livestock products. It is by no means clear, however, that the 1965 price increases, whose magnitude was limited by the decision not to raise retail prices, will be sufficient to cover costs (including reasonable compensation for collective farm labor) and make livestock production profitable.

State Farm Prices

State farm delivery prices (*sdatochnye tseny sovkhovov*) are essentially different in nature from the prices paid to collective farms. State farms are "factories in the field" similar to state enterprises in industry, transportation, trade, etc. Their employees receive money wages on a piece-rate basis, and they calculate cost of production (*sebestoimost'*) in essentially the same way as other state enterprises.

²⁷ For a detailed analysis of the new agricultural program, see Karcz 65.

²⁸ Sabel'ev 65, p. 25.

²⁹ Karcz 64a, p. 144.

³⁰ Stollarov 63, pp. 59-60.

If—as has commonly been the case—sales revenue fails to cover sebestoimost', the deficit is met by redistributions of profits within the state farm network or by operating subsidies from the budget. (In addition, investment has been financed by budget grants.) Because state farm costs are reimbursed by the combination of delivery prices and subsidies, the failure of prices to cover costs does not restrain output. In contrast, for the collective farms, prices are the sole source of compensation for production expenses and productive effort.

Until 1954, state farm prices were based on (but were lower than) the corresponding state purchase prices for collective farms. As these prices did not cover production costs, a subsidy was planned for each type of state farm output. In 1954, with the announced objective of eliminating subsidies, state farm delivery prices were raised and differentiated by geographic zones. The new prices were supposed to yield an overall profit of 7.7 percent on sebestoimost', although it was expected that livestock would still be produced at a loss, to be covered from earnings on crops.³¹ But, as table 5 shows, by 1956 the overall profit rate was only 5.6 percent, and by 1958 crop profits failed to cover livestock losses, resulting in an overall loss rate of 1 percent. By 1960, net losses of the state farm system covered by budget subsidies amounted to 600 million rubles (in terms of "new" rubles after the 1961 monetary reform). To eliminate these subsidies, the Government in 1961 reduced the state farms' input prices and raised their output prices. State farm costs were cut by about 300 million rubles per year through a reduction of prices on machinery, spare parts, and fuel. State farm revenues were augmented by 500 million rubles through higher prices for livestock products, grain, sugar beets, and fruits.³² In 1962, state farm livestock prices were raised again, concurrently with the increase in collective farm livestock prices. However, as table 5 shows, the new prices still failed to cover costs for cattle, pigs, poultry, and eggs. In 1963, along with collective farm prices, state farm prices were raised on cotton, sugarbeets, and certain vegetables.

TABLE 5.—Soviet State farms: Profitability¹ of selected commodities, selected years, 1956-64

[In percent]

Commodity group	1956	1958	1961	1962	1963	² 1964
All products.....	5.6	-1.0	-4.8	-6.2	-12.6	3.9
Crops.....	38.9	15.6	19.1	24.0	17.5	27.5
Grain.....	44.9	18.4	13.9	23.5	4.5	19.6
Raw cotton.....	12.0	-20.0	13.7	-6	18.8	15.9
Sunflowers.....	82.7	110.9	102.2	121.4	100.0	107.4
Sugarbeets.....	27.9	20.8	13.8	9.1	.1	30.7
Potatoes.....	13.5	10.1	4.4	1.0	13.0	16.2
Livestock products.....	-14.6	-11.8	-15.2	-17.7	-22.6	-7.9
Milk.....	-12.5	-5.8	-16.9	-25.3	-29.2	-17.8
Cattle.....	-42.1	-36.5	-20.1	-15.3	-23.7	-7.4
Pigs.....	-13.7	-15.8	-29.2	-28.2	-35.7	-11.1
Sheep.....	-23.2	-9.4	15.2	6.5	5.5	12.0
Poultry.....	-38.0	-40.5	-43.6	-30.3	-26.1	-22.8
Eggs.....	19.2	8.7	-9.1	-4.8	-4.1	-1.2
Wool.....	7.3	5.0	37.3	11.1	13.4	23.2

¹ Profitability = $\frac{\text{Sales revenue} - \text{sebestoimost}'}{\text{Sebestoimost}'}$. Minus sign means loss.

² Plan.

Source: Semenov 65, p. 25.

³¹ Semenov 65, p. 25.

³² Kondrashev 63, pp. 305-10.

The state farms also benefited from price increases under the new agricultural measures announced in 1965, although their prices remain below collective farm prices by 10 percent on meat, 15 percent on wool, 17 percent on cotton, 39 percent on grain, and 55 percent on sunflowers.³³ The new state farm prices are expected to provide a profit of 5–10 percent on livestock and at least 30 percent on grain.³⁴ At the new prices, the profitability of total state farm output in 1965 is planned at 21.1 percent (in relation to sebestoimost').³⁵ However, even if the new prices can provide this level of profitability, they would still fall short of enabling the state farms to join other state enterprises in shifting to the method of operation envisioned in Kосygin's September 1965 speech. To do this, the state farms would have to earn profits sufficient to make payments on their capital, establish incentive funds, and finance most of their investment programs. According to one estimate, the state farms would have required a profitability rate of 48.6 percent (on sebestoimost') simply to finance the investment program planned for them in 1965—excluding any payments on capital or contributions to incentive funds.³⁶ The new state farm prices thus apparently aim only at covering operating costs (for all farms taken together), rather than at putting state farms on the same financial footing as other state enterprises. To accomplish the latter would require a much larger increase in state farm prices—which would conflict with the traditional policy of setting state farm prices at or below collective farm prices.

PRICE REFORM DISCUSSION

Beginning in 1958, defects in agricultural procurement prices have been criticized and suggestions for improvement advanced at scholarly conferences and in Soviet economic journals and newspapers. The agricultural price reform discussion has been more cautious than the industrial price reform discussion, because agricultural price changes are politically sensitive measures which directly affect the distribution of income between the rural and urban populations. Changes in industrial prices, in contrast, primarily affect financial relationships within the state sector.

Criticisms

The principal criticisms concern price-cost relationships for different products, defects in geographical differentiation of prices, and the failure of prices to promote a rational pattern of specialization.

1. One criticism is that both the level and the structure of procurement prices have been set without adequate regard for production costs (including reasonable compensation for the labor of collective farm members). As a result, incentives to expand collective output are lacking, and collective farmers instead devote as much effort as possible to their private plots. On the one hand, more accurate calculations of costs are needed. On the other, the Government should fix prices so as to make the production of each product profitable,

³³ Semenov 65, p. 26.

³⁴ Emelianov 65, p. 33. As in the past, such estimates may be too optimistic.

³⁵ Esin 65, pp. 68–69.

³⁶ *Ibid.*

rather than expecting profits on plant products to compensate losses on livestock products.³⁷

2. Prices of individual crops are differentiated geographically in an effort to skim off differential rents arising from more favorable natural conditions. However, the variation in prices is not as great as the variation in costs in the different zones.³⁸ As a result, the profitability of a given crop varies greatly from zone to zone. For some crops, such as potatoes, flax, and wool, prices are not differentiated geographically, even though they are produced in different areas with widely varying costs.³⁹ In addition, there are large differences in costs and profitability within price zones, some of which cover a very large area. For example, grain price zone IV stretches from the shores of the Arctic into southern Siberia, comprising an area 10.3 times that of France, with extreme variations in soil, rainfall, temperature, and length of growing season.⁴⁰ One consequence of these defects in price zoning is large differences in the incomes of collective farmers in different regions, and even in the same region, due to natural conditions, rather than to differences in equipment, productive effort, or managerial skill. Another consequence is that the state does not obtain the maximum results from a given total expenditure on agricultural procurements. By increasing prices in some zones and reducing them in others, the state could secure a net increase in the volume of procurements without any increase in total procurement expenditures.⁴¹

3. Many collective and state farms operate at low profitability or losses because they are required, by their delivery plans, to produce products for which they are not suited. It is not unusual for collective farms to receive procurement plans for 15 or 20 different products, some of which they are expected to produce at a loss.⁴² Often the quotas exceed the farm's capabilities, forcing it to request loans in kind for seeding or planting purposes.⁴³ In part, the lack of rational specialization is the result of the low level of agricultural production: the state is afraid to reduce or eliminate delivery plans from low-yield areas lest it lose badly needed supplies. On the other hand, the requirement that farms produce and deliver products for which they are not suited prevents them from specializing in those crops on which their yields would be much higher.⁴⁴

Reform proposals

Various proposals have been advanced to deal with shortcomings in the level, structure, and regional differentiation of agricultural procurement prices. They include the following: (1) basing prices on marginal rather than average costs; (2) revising the boundaries of price zones; (3) using instruments other than price differences to take

³⁷ According to some recent estimates, profitability rates of 40 to 60 percent on sebestol-most' (including reasonable compensation to collective farm members) would be necessary if collective farms are to pay income taxes, make contributions to pension and welfare funds, and carry out planned expansion of fixed and working capital. See Florent'ev 65, pp. 12-16, and Laptev 65, p. 27.

³⁸ According to one estimate, the differences in sebestol-most' in different natural zones range from 180 to 600 percent for different agricultural products, while the corresponding differentiation of procurement prices is only 30 to 50 percent. See Diachenko 64a, p. 83.

³⁹ Boev 64, pp. 202-09.

⁴⁰ Durgin 64, pp. 393-94. Data on intrazonal variations in incomes are given in Tresorukova 65.

⁴¹ Tiapkina 64, pp. 147-48.

⁴² Florent'ev 65, pp. 17-18.

⁴³ Karcz 65, p. 148.

⁴⁴ Lukinov 64, pp. 46-49.

differential rent; and (4) varying prices in accordance with harvest fluctuations.

1. At present, the zone price of a product is supposed to be based on the average cost of production in that zone. As a result, collective farms with higher than average costs for the zone have difficulty covering expenses, and the incomes of their members are correspondingly low. The supporters of marginal cost pricing argue that if the state requires a farm to produce and deliver a commodity, the state should pay the farm a price adequate to cover costs (including reasonable compensation for the labor of its members) and provide a profit for expansion. Although a few members of the marginal cost school favor basing price on the national marginal cost of the product, most accept the principle of zonal price differentiation and urge instead that price be based on the marginal cost of the zone. More precisely, they advocate basing the price on the cost of production of farms with the worst land in the zone (in terms of fertility and location) but with average conditions of production in regard to mechanization, labor productivity, and managerial efficiency. The differential rent accruing to farms with better land would be taken by taxation.⁴⁵

Prices based on marginal costs would, of course, mean a much higher bill for state procurements—double, or for some products or zones even triple, the bill with prices based on zonal average costs. However, there need not be a corresponding increase in wholesale and retail prices. As noted, additional tax revenues would be collected on the differential rent of farms on inframarginal land. These revenues would be allocated to subsidies to the light and food industries and the trade network intended to keep wholesale and retail prices below the level of procurement prices. Opponent of this approach object that it is undesirable to set retail prices below procurement prices, as this situation encourages farms to buy agricultural products at retail prices in order to resell them to the state at procurement prices. Critics also point out that it would be difficult to determine the correct amount of differential rent to be taken through taxation from all but the highest cost farms.⁴⁶

2. Suggestions for improving price zoning include the following: The number of zones should be increased to make them more homogeneous and to reduce intrazonal differences in cost and profitability. For example, the number of zones for grain in the RSFSR should be increased from 8 to 16 or 18. Zone prices should be introduced for such crops as potatoes, flax, and wool. The revision of zone boundaries should consider both natural factors (such as soil, temperature, precipitation, topography, etc.) and economic factors (such as the structure of output, extent of mechanization, income per acre and per man-day, etc.). Price zoning should promote rational specialization through higher profitability for crops in the zones most suited to them, but prices should be high enough to cover costs and provide a profit even in the less suitable areas.⁴⁷

3. Even with improvements in the delineation of price zones, intrazonal differences in cost and profit would continue to exist. To take

⁴⁵ Bolgov 62, pp. 96-98.

⁴⁶ Boev 63, p. 122.

⁴⁷ Boev 64, pp. 205-09, and NIFI 63, pp. 158-62.

some of the differential rent of farms with better than average, or better than marginal, land in the zone, income taxes and/or land taxes are recommended. An income tax has been levied on collective farms for a number of years, not only to take differential rent but also to exert control over the fulfillment of production and financial plans.⁴⁸ However, the tax has been levied on gross income (including labor-day distributions to members) rather than on net income, and with virtually no progression in rates. Reform proposals have recommended using net rather than gross income as the base, and introducing a progressive scale of rates. In 1965, the base was shifted to net income, and an element of progression was introduced through the exemption from taxation of the first 15 percent of net income.⁴⁹ An alternative, or supplementary, method of taking rent is direct money rent payments varying with the quality of the land. However, this method requires a land cadaster, which is not likely to be available for many years.⁵⁰

4. Another reform proposal is that, instead of keeping prices stable despite variations in harvests, the Government raise them temporarily when harvests are especially poor. Under this proposal, in bad harvest years both agricultural procurement prices and state retail prices would be increased.⁵¹ The 1958 agricultural price revision was supposed to have introduced flexible procurement prices varying with harvests, but in practice flexibility operated in only one direction: prices were reduced for very good harvests but not raised for bad harvests.⁵²

The 1965 agricultural price revisions reflect these reform proposals only to a very limited extent. Prices are still based on zonal average costs, except in the case of grain procurements in the main grain areas, where the new prices seem to be related to cost conditions on farms located on the least favorable land.⁵³ While some price zone boundaries were altered, there was no comprehensive revision based on a careful study of natural and manmade factors affecting costs. The nature of the collective farm income tax was significantly improved, but it is still an imperfect instrument for taking differential rent—inferior to explicit rental payments, which are precluded by the absence of a land cadaster. Prices are not to vary inversely with the size of the harvest. Rather, the reintroduction of premium prices for above-plan deliveries of wheat, rye, cotton, and sunflowers will make their average realized prices higher when harvests are good.

On balance then, the 1965 price changes appear to be another desirable, but still relatively modest, step on the road to guiding Soviet agriculture through prices and monetary incentives, rather than administrative commands. Soviet agriculture still lacks sound prices capable of securing rational specialization of production through decentralized decisions of farm managers. Moreover, it is important to recognize that although higher prices, properly related to costs, can

⁴⁸ NIFI 63, p. 13.

⁴⁹ Paevskii 65.

⁵⁰ Bronshtein 60, p. 42. Despite several conferences and much discussion in the technical literature, Soviet economists are not agreed on the basic principles of the cadaster, the concrete steps to compile it, or the uses to be made of it, according to Buzdalov 65, pp. 11–12.

⁵¹ Lukinov 64, pp. 80–82.

⁵² Matskevich 65, p. 5.

⁵³ Karcz 65, p. 145.

stimulate production, the development of Soviet agriculture also requires a steady and adequate flow of industrial inputs (including investment goods) at reasonable prices and on reasonable credit terms, as well as adequate and guaranteed remuneration for farm members.

CHAPTER IV. RETAIL PRICES

NATURE AND TRENDS

There are two principal types of retail prices at which goods are sold to households in the Soviet Union: state retail prices and collective farm market prices.⁵⁴

State retail prices

The state retail price (*gosudarstvennaia roznichnaia tsena*) is charged by state retail stores, consumer cooperative stores, and state and cooperative service establishments, such as restaurants, laundries, theaters, etc. The consumer cooperatives, which operate primarily in the rural areas, are closely supervised by the state, which determines their number, size, location, etc.; allocates goods to them; and establishes sales plans for them. Of total state, cooperative, and urban collective farm market sales in 1964, the respective percentage shares of the three types were 68, 28.1, and 3.9.⁵⁵

State retail prices supposedly are fixed with the aim of clearing the market both in aggregate terms and for each commodity. In aggregate terms, the objective is to set the general level of state retail prices so that total retail sales at that price level will absorb the money income which the population is expected to want to spend at state and cooperative retail outlets. For individual goods, the objective is to fix the price of each at a level which equates planned supply and expected demand.

The general level of retail prices depends upon both tax and wage policies. The Soviet Government relies primarily on price-increasing taxes, namely the turnover and profits taxes, to finance investment, military programs, and social services. As a result, the general retail price level is higher than it would be if direct taxes on households were used to a greater extent. Planned increases in private consumption can be distributed among households by reducing retail prices or by increasing money incomes (or by a combination of the two). The first method distributes the increase in consumption among the population as a whole, while the second is more selective. With stable retail prices, money incomes of different segments of the population can be increased by different degrees (and at different times) to provide selective incentives for increased production and for occupational and geographical shifts.

The first method was used from 1948 to 1954, when retail prices were reduced each spring. As table 6 shows, since 1954 the state retail price level has been relatively stable, although there have been adjustments in the prices of individual goods.⁵⁶ In addition to a moderate rise in

⁵⁴ The following discussion draws on Bornstein 62, pp. 88-97.

⁵⁵ *Nar. khoz.* 64, p. 624.

⁵⁶ For a discussion of changes in the prices of individual goods since 1954, see Stoliarov 63, pp. 99-102, and Belorusov 65, pp. 151-52.

the general wage level,⁵⁷ there have been selective increases in the money incomes of particular segments of the population, through increases in agricultural procurement prices, pensions, minimum wages, and the wages of selected occupations (miners, teachers, etc.).

TABLE 6.—*Indexes of Soviet state retail prices, selected years, 1952–64*

[1950=100]

Commodity group	1952	1955	1958	1962	1963	1964
All commodities.....	87	74	76	76	76	76
Food.....	82	70	73	75	75	75
Meat.....	74	60	66	78	85	85
Fish.....	88	79	77	76	76	76
Butter.....	74	64	65	76	83	83
Vegetable oil.....	84	65	65	65	65	65
Sugar.....	91	80	80	77	75	75
Bread and bread products.....	73	60	59	59	59	59
Potatoes.....	(1)	(1)	92	100	112	110
Vegetables.....	(1)	(1)	88	84	90	83
Alcoholic beverages.....	88	78	94	94	94	94
Nonfood commodities.....	95	81	80	79	78	78
Cotton fabrics.....	98	71	71	71	71	71
Woolen fabrics.....	97	92	92	89	89	89
Silk fabrics.....	99	91	89	80	77	77
Clothing.....	98	90	90	86	86	86
Knit goods.....	99	88	87	87	87	87
Leather footwear.....	98	81	81	82	83	83
Rubber footwear.....	99	76	75	76	76	76
Tobacco products.....	87	82	81	82	82	82
Watches.....	86	82	79	54	54	49
Bicycles.....	87	78	78	60	60	60

¹ Not available.

Sources: Nar. khoz. 58, p. 771; Nar. khoz. 61, p. 654; Nar. khoz. 62, p. 533; Nar. khoz. 63, p. 540; Nar. khoz. 64, p. 647.

Under planners' sovereignty in the U.S.S.R., the basic method of eliminating a disequilibrium in the market for a particular good is to adjust demand to supply, in contrast to the adjustment of supply to demand which characterizes the response under consumers' sovereignty. The latter kind of adjustment occurs in the U.S.S.R. only to a limited extent when, in response to evidence in the form of shortages or surpluses at the prevailing prices, planners modify the composition (types, models, etc.) of the output of the various kinds of consumer goods which can be produced with the resources which they have allocated to those lines of production.

On some goods, retail prices are set with other objectives which conflict with the aim of clearing the market. One such additional objective, stemming from administrative considerations, is to avoid changing prices very often. This objective clearly conflicts with the aim of balancing demand with supply.

Another objective is to make the distribution of real income less unequal than the distribution of money income. To do this, the Government fixes lower prices for mass consumption goods (such as basic foodstuffs) which predominate in the budgets of lower income groups, and higher prices for goods (e.g., consumer durables and luxury foodstuffs) which are relatively more important in the budgets of higher income groups. In pursuit of this objective, prices of some food products, such as meat, have been deliberately set below the equilibrium level (even below the corresponding agricultural procurement prices in some cases), as persistent shortages attest. In this way, the in-

⁵⁷ Average monthly wages of workers in the state sector rose from 71.5 rubles in 1955 to 90.1 rubles in 1964. Nar. khoz. 64, p. 555.

formal rationing of queues and empty shelves helps to modify the distribution of real income from the initial distribution of money income.

Relative prices are also used to pursue other objectives of social policy. For example, low prices are set on books in order to promote indoctrination and education, and on children's apparel in order to aid large families, while high prices are intended to curb the consumption of vodka.

The turnover tax, which provides about 40 percent of total budget revenue, is the principal device used by planners to secure the desired level and structure of retail prices. The principal components of the state retail price are (1) the enterprise wholesale price (or the agricultural procurement price plus the markup of the procurement agency), (2) the turnover tax, (3) the wholesale trade margin, and (4) the retail trade margin. In addition, there are transportation charges. The wholesale and retail margins are intended to cover expenses and provide a profit at the respective stages. The respective shares of enterprise wholesale prices, turnover taxes, and the two trade margins in the total value of state retail sales in recent years may be estimated very roughly at 50, 40, and 10 percent. Their relative importance in the prices of individual goods differs markedly, however, precisely because the turnover tax is used to fix the retail price at the desired level.

The turnover tax thus serves as a cushion which separates the retail prices paid by households and the wholesale prices received by producing enterprises in industry and agriculture. It permits the planners to alter consumer prices without changing producer prices correspondingly, and vice versa. Retail price reductions need not be accompanied by wholesale price reductions, and wholesale price increases need not be followed by retail price increases. The turnover tax separates not only the levels but also the structures of consumer and producer prices, since the different rates of taxation on different goods cause their relative retail prices to differ from their relative wholesale prices. For most goods the turnover tax is set as a specific ruble amount, and there are separate wholesale and retail price lists. For a limited group of goods, chiefly intended for local markets, the turnover tax is levied as a percentage of the enterprise wholesale price. These goods include some types of haberdashery, household items, and recreational and educational items. For certain nonfood consumer goods, the turnover tax is calculated as a percentage of the retail price. This scheme is used for consumer goods produced by the paper, chemical, and radio industries, as well as for sewn and fur items.⁵⁸

Collective farm market prices

The collective farm market price (*tsena kolkhoznogo rynka*) of goods is determined by supply and demand in the individual collective farm markets, varying from market to market and from day to day in the same market. There are about 8,000 collective farm markets, approximately half of them in towns of various sizes and half in rural areas. The markets occupy designated trading areas and are equipped with a varying number of stalls, benches, tables, storage bins, meat and milk control points, etc. Sellers are charged a small daily fee for the right to offer their wares. About 700,000 peasants are reported to participate in the markets each day.⁵⁹

⁵⁸ Kornienko 64, pp. 117-121.

⁵⁹ Lukinov 64, p. 25.

Although urban collective farm market sales represented only about 4 percent of total state, cooperative, and urban collective farm market sales in 1964, their importance in Soviet retail trade is greater than this figure suggests. In relation to total trade of the three channels in the same food goods, the collective farm market share in 1964 was 12 percent. In some important cities the collective farm markets account for 20 to 40 percent and more of total sales of major food products.

Collective farm market prices are set by supply and demand, but both supply and demand are strongly influenced by the State. Demand on the collective farm market depends on the extent to which the State retail network is able, with available quantities at the established prices, to satisfy the effective demand of households. The excess purchasing power remaining after household expenditures in the State retail trade sector finds an outlet in the collective farm market. The supply offered by agricultural producers (collective farms, peasants, and urban workers with garden plots) depends on the amount of output they have left after selling to State procurement agencies.

In contrast to the relative stability of State retail prices (see table 6), collective farm market prices have risen sharply in the last few years as a result of poor harvests and reduced supplies in both State stores and collective farm markets. Table 7 shows the trend of collective farm market prices during recent years.⁶⁰ According to one estimate, toward the end of 1962 collective farm market prices exceeded State retail prices on the same items by about 60 percent on the average.⁶¹ Comparable data are not available for a more recent period, but it is clear that the difference is now much greater, because of the rise in collective farm market prices in the face of stable State retail prices.

TABLE 7.—*Indexes of Soviet collective farm market prices, selected years, 1958-64*¹
[1950=100]

Commodity group	1958	1960	1963	1964
All commodities, including cattle.....	109	108	131	138
All commodities, excluding cattle.....	107	107	129	135
Bread products.....	67	64	100	119
Grains.....	67	62	89	111
Flour.....	53	49	91	120
Groats.....	63	63	97	105
Potatoes.....	119	119	170	159
Vegetables.....	131	119	158	161
Cabbage.....	146	148	193	190
Onions.....	124	91	130	162
Fruits.....	118	115	124	118
Vegetable oil.....	70	67	68	75
Meat and meat products.....	105	109	121	151
Beef.....	126	127	148	171
Pork.....	88	92	100	123
Poultry.....	120	129	146	186
Milk and dairy products.....	92	96	116	125
Milk.....	84	88	108	114
Butter.....	87	86	102	131
Eggs.....	96	96	112	123
Cattle.....	132	126	150	184

¹ Based on data for 251 large cities.

Source: Nar. khoz. 64, p. 659.

⁶⁰ For a careful appraisal of the statistical data on collective farm market sales and prices, see Karcz 64b.

⁶¹ Stollarov 63, p. 62.

PRICE REFORM DISCUSSION

At scholarly conferences and in the economic literature of the last few years, Soviet economists have criticized a number of aspects of retail price formation and have advanced suggestions for changes.

Criticisms

Among the criticisms of retail prices are the following: (1) prices diverge from a market-clearing level; (2) prices are set without adequate study of demand; (3) rural price differentials are unjustified; and (4) pricelists are outdated and too complex.

1. For decades, many state retail prices have been too low, and demand has exceeded supply, giving rise to shortages and queues. Among the causes responsible are the effort to modify income distribution in favor of lower income groups, underfulfillment of ambitious production plans, and the failure to meet assortment plans. In addition, local shortages often exist because of errors in the distribution of goods by the trade network. A general situation of excess demand was even justified by Stalin on the ground that it was a "law" of socialism that demand should outstrip supply.⁶² This position has now been condemned as theoretically unsound and undesirable in practice.⁶³ Nevertheless, prices remain below the market-clearing level for various goods, particularly meat and certain consumer durables, and for certain services, notably housing.⁶⁴

While there are shortages of these goods, at the same time there are large excess inventories of yard goods, clothing, footwear, cameras, bicycles, watches, and sewing machines. In part, these surpluses are due to overpricing, but they also are due to poor estimates of demand and to the failure to adjust production to changes in consumer tastes. Thus, sharp price cuts on sewing machines and outmoded clothing failed to liquidate excess stocks.⁶⁵

2. If it is intended to strive for market-clearing prices, then accurate estimates of current and future demand are essential. But such studies of consumer demand are lacking. Only in the last few years has serious attention been devoted to demand studies, and work on the subject is still relatively primitive. In particular, demand estimates are too aggregative, covering excessively broad categories of goods and very large geographic areas, and neglecting differences in the demands of different income groups.⁶⁶ There has been little application of mathematical techniques to the analysis of retail trade problems.⁶⁷

3. Since 1949, prices on various goods in rural areas have exceeded urban prices for the same items by about 7 percent. This differential has been justified on the ground that marketing and transportation costs are higher for rural trade. However, the price differential tends to divert peasant purchases from rural to urban retail outlets, and to encourage "speculation," i.e., resale of goods bought in the city to other peasants at higher prices.⁶⁸

⁶² Bergson 64, p. 70. For an evaluation of Soviet retail prices from the standpoint of welfare economics, see Bergson 64, ch. 4.

⁶³ Nikitina 65, p. 119.

⁶⁴ Turetskil 65, p. 16.

⁶⁵ Goldman 65, pp. 372-73.

⁶⁶ Diachenko 64b and Rogova 65.

⁶⁷ Kononov 65, pp. 28-29.

⁶⁸ Diachenko 64b, p. 100.

4. Many retail price lists are out of date. Retail price lists on some goods, especially fabrics and sewn goods, were fixed in 1954 on the basis of 1939-40 prices.⁶⁹ In 1963, the RSFSR price list on sewn goods contained 100,000 prices, of which about one-fourth pertained to items long since removed from production.⁷⁰ Retail price lists are so numerous and so complex that only a small group of specialists understands them. For example, there are over 90,000 price lists for clothing and over 7,000 for footwear.⁷¹

Reform proposals

Various suggestions to improve retail prices have been advanced, including (1) more intensive study of demand, (2) greater flexibility of prices, (3) more decentralization of price fixing, and (4) wider use of the two-price-list scheme.

1. As a basis for improved price-setting, consumer demand studies should be intensified. In particular, attention should be devoted to income as well as price elasticities of demand, rural versus urban demand, and the long-term evolution of demand and prices. The work of the various research institutes studying different aspects of demand should be more closely coordinated.⁷²

2. Price flexibility should be increased in various ways: Clothing and footwear prices should be raised more often and more quickly on fashionable items in high demand, and reduced on slow-moving, out-of-style items. To adjust production to sales, wholesale prices of producers should be varied in the same direction as retail prices. Seasonal prices, now used for a limited number of food products (such as eggs, fruits, and vegetables), should also be applied to yard goods, clothing, and footwear. When harvests are poor, both retail and agricultural procurement prices should be raised.⁷³

3. Since 1957, the union republic and regional authorities have been responsible for fixing retail prices on a group of goods accounting for about 45 percent of retail sales. This group includes sausage and confectionery articles, eggs, milk, sewn goods, furniture, toys, and non-alcoholic beverages. The central authorities in Moscow set prices on the remainder of retail trade, including such important goods as bread, meat, fish, butter, cloth, footwear, knit goods, tobacco, vodka, and most consumer durables. It has been suggested that further decentralization of price-fixing is desirable, in order to increase price flexibility and bring prices closer to a market-clearing level. In particular, it has been proposed that producing enterprises, in conjunction with the trade network, fix prices on new items, in line with prices on analogous existing items.⁷⁴

4. In the case of sewn goods, china and earthenware, glass articles, and pots and pans, it is proposed that the two-price-list scheme be adopted instead of the present arrangement of levying the turnover tax as a percentage of the retail price. When the tax is levied as a uniform percentage of the retail price for an entire class of goods, the relative structure of retail prices also determines the relative struc-

⁶⁹ Odintsova 64, p. 4.

⁷⁰ Dlachenko 64b, p. 108.

⁷¹ Belorusov 65, p. 160.

⁷² Dlachenko 64b.

⁷³ Nikitina 65, p. 122; Dlachenko 64b, p. 19; and Lukinov 64, pp. 80-82.

⁷⁴ Partgul 65, p. 11.

ture of enterprise wholesale prices. In many instances, items which are more complex and more expensive to manufacture do not have correspondingly higher retail and wholesale prices. As a result, the profitability of different items to the producing enterprise varies, and it is inclined to depart from its assortment plan by producing more of the "advantageous" items and less of the "disadvantageous" items. By adopting the two-price-list scheme—that is, by fixing the turnover tax as a specific ruble amount for each item—the Government could adjust the wholesale price structure independently of the retail price structure and thus reduce or eliminate differences in the profitability of producing different items in the assortment. To adopt this scheme in the case of clothing, however, it would be necessary to shift the turnover tax, now levied on the cloth rather than on the finished garment, to the final product.⁷⁵

RECENT CHANGES

Recent measures in the sphere of retail price formation show a limited response to these criticisms and recommendations. For example, in 1965 the State Committee on Trade of the U.S.S.R. Council of Ministers was instructed to establish an All-Union Scientific Research Institute to study the demand for consumer goods and the problems of trade fluctuations, with branches in the union republics. Organizations to study demand have been created in trade organizations, republic ministries of trade, and at various levels of the consumer cooperative system.⁷⁶

In 1963 a scheme of temporary prices was established under which temporarily high prices are set for new fabrics, clothing, footwear, and furniture in high demand. At the end of 1 year (or sooner if the demand declines), prices are reduced to their "permanent" level. The temporary surcharge of 10 to 15 percent applies to enterprise wholesale prices as well as to retail prices, because the enterprise wholesale prices of these goods are set as a percentage of their retail prices. This scheme has been criticized because of lengthy delays in setting the new prices, which are fixed at the republic level. Another criticism is that the resulting enterprise wholesale prices do not always make the new goods as profitable to produce as the older items which they replace, causing the enterprise's profits to fall.⁷⁷

In the now famous Bolshevichka-Maiak experiment, the pricing of new goods was decentralized to the enterprise level. The RSFSR Ministry of Trade authorized the factory and its retail outlets jointly to establish retail prices on new garments, on the basis of prices of existing goods but with due recognition of demand factors and additional costs incurred in producing the new garments. Because there is no turnover tax on clothing, enterprise wholesale prices were increased in the same proportion as retail prices. However, the factories found that the new models were less profitable to produce than the old ones, and their profits declined.⁷⁸ While price setting (on new goods) was decentralized to the enterprise level during this experi-

⁷⁵ Turetskil 63, pp. 20–21, and Odinstova 64, pp. 6–7.

⁷⁶ Orlov 65, p. 97.

⁷⁷ Belorusov 65, pp. 158–59; Odinstova 64, p. 6; and Voronkov 64.

⁷⁸ Orlov 64, pp. 114–15, and Levin 65, pp. 11–12.

ment, when the scheme was extended to a large part of the light and food industry in 1965, enterprises were not given the right to fix prices on new products, and this right was taken away from the two experimental firms. This retreat from decentralized price setting was not publicized or explained in connection with the announcement of the "success" of the experiment and its extension to other enterprises.⁷⁹

Other developments in retail pricing worthy of brief mention are the elimination of the rural price differential and the revision of long-neglected prices on services. As part of the effort to improve the peasantry's terms of trade, beginning in 1959 the rural price differential was successively eliminated on a number of products, and it is to be abolished completely in 1966.⁸⁰ During 1962-65, a comprehensive revision of prices on personal services (laundry, haircuts, clothing, shoe and appliance repairs, etc.) was conducted in the Ukraine, and it is apparently to serve as a guide to similar revisions in other areas.⁸¹

These measures indicate a new interest on the part of the Soviet Government in setting better retail prices—an interest stimulated by the dramatic buildup of unsold goods, after a long period of excess demand conditions when improper relative prices could be tolerated. However, the Government has been reluctant to move toward more flexible prices responsive to supply and demand conditions. The use of temporary prices has been limited, and the decentralization of price fixing to the enterprise level, tried in the Bolshevichka-Maiak experiment, has been rescinded. In sum, it appears that the central authorities are much more concerned about retail prices than ever before, but they are hesitant to surrender control over retail prices to the enterprise and through it to the market.

CHAPTER V. CONCLUSION

Soviet economists, planners, and political leaders have been devoting growing attention to prices as the Soviet economy slowly moves toward a greater role for market forces and money flows, rather than administrative commands in physical terms, in guiding production and resource allocation. A broad critical discussion of industrial prices, at scholarly conferences and in the economic press, began in 1956. Similar, though more cautious, discussions of agricultural and retail prices started a few years later. These discussions have exposed many defects in the price system and have produced a wide variety of suggestions for improvements, ranging from minor technical revisions to sweeping changes of a basic character.

It is clear that the highest levels of the Communist Party and the Government are now concerned with price problems. Yet the central authorities have shown great reluctance to embark on major reforms in the price system in order to secure prices which reflect scarcity and can allocate resources efficiently. One reason, surely, is resistance to such reforms by members of the planning and administrative bureaucracy, who are used to, and comfortable with, command economy

⁷⁹ Lacs 65.

⁸⁰ Karcz 65, p. 157.

⁸¹ Turetskii 64 and Vniukov 65.

methods which do not depend on sound prices. They have a personal stake in the preservation of the traditional approach to resource allocation. They also genuinely distrust moves toward reliance on market forces and scarcity prices, fearing that they inevitably will bring inflation, on the one hand, and unemployment, on the other.

Because the political leadership and the central planners are unwilling to surrender control over the economy to consumers' sovereignty, they hesitate to let flexible scarcity prices determine output, allocate resources, and distribute income. Thus, it is not surprising that, despite the changes in enterprise performance indicators, managerial powers, and incentives, in Kosygin's "new economic model" price setting remains centralized, and, according to the information available so far, will largely follow traditional patterns. As a result, the planners will continue to be faced with the impossible task of regulating the 8 to 9 million prices in the Soviet economy.⁸²

⁸² Belorusov 65, pp. 20-21.

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