SOVIET ECONOMIC REFORMS: 1950-1970
An Examination and Assessment of the Economic Reforms
Undertaken in the Soviet Union in Industry,
Agriculture and Trade:
1950-1970

by

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B. Comm., University of British Columbia, 1970

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We accept this thesis as conforming to the
required standard

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April, 1972
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Department of Commerce and Business Administration.

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Date April 13th, 1972.
The purpose of this study is to examine the modifications made in the mechanics of allocation utilized in the Soviet Union, since the death of Stalin, in industry, agriculture, and trade. These sectors of the economy have been chosen because they comprise the predominant portion of productive activity in the Soviet Union, and because these sectors have undergone the most significant changes of their forms of allocation.

The crux of the original Stalinist allocation mechanics was quantitative planning: an imperative economic plan formulated by the central planning apparatus to direct the economic processes of the nation. The implementation of the macro-economic plan at the micro level was carried out through a complex system of centralized physical directives and financial controls, and by a system of material incentives to encourage the fulfillment of the centrally defined targets or goals. Within industry, agriculture, and trade, the mechanics of the allocation system were somewhat differentiated in that the combination of centralized directives, physical and financial controls, and the directive effects of prices and material incentives were integrated in varied ways to bring about the desired end results. I will first examine the integration of these variables in forming a 'coherent' guidance system, and their relative dominance in determining the allocation of the nation's resources during the Stalinist period, and will then consider
the modifications made in their relative importance up to the present time.

The first chapter of this study deals with industry. It concentrates on the three component parts of the Soviet industrial allocation system: the formulation of production-supply plans; financial planning and the role of prices; and micro-economic targets, controls and incentives. The annual planning procedure described refers specifically to heavy industry. However, this procedure is generally applicable to the macro planning in both agriculture and the consumer goods industry as well, and thus provides background information to the more abbreviated discussions of the planning procedures used in these latter two sectors of economic activity. Similarly, in the discussions of financial planning and prices, the relationship of these variables to heavy industry is intensively investigated, but the discussion is expanded to a more encompassing level in order to give a general comprehension of the role of currency and prices in the Soviet economy as a whole. The chapter concludes with an investigation of the relative dominance of physical and financial directives and controls at the micro level, and the integration of the material incentive scheme in the allocative system to encourage behavioural adherence to the centralized directives and controls.

The second chapter deals with agriculture. It follows a similar investigative format for both collective and state farms, but places emphasis on collective farm production, and distribution of outputs, for two reasons: collective farm and 'private' plot agricultural activities provide the bulk of the
nutritional requirements of both the rural and urban populace; and the guidance system used for state farming is very similar to that used in the industrial sector already discussed.

The third chapter deals with trade. It discusses both domestic and foreign trade. With regard to domestic trade, the macro planning procedure is described, the distribution network for consumer goods is detailed, and the microeconomic targets and controls formulated for light industry are distinguished from those used in the allocation of producer goods. The discussion on foreign trade details the roles of foreign trade in the Soviet economy, its integration into the national economic plan, and the reforms in the methods and means utilized to finance the flows of traded commodities.

The final chapter of the paper assesses the original Stalinist allocation mechanics in the economic sectors analyzed, and the successes and shortcomings of the modifications made in their respective guidance systems to the present time. Many of the modifications made prior to the general reforms undertaken in 1965 pertained to the administrative-economic bureaucracy and thus did not alter any fundamental characteristics of the Soviet allocation systems. The 1965 reforms increased the role of selected financial and price variables, and material incentives, in an attempt to increase efficiency at the microeconomic level. However, the long-run benefits of the post-Stalin reforms are smaller than originally anticipated. Efficient decision making that would optimize the execution of economic processes in such a way as to maximize the utilization of resources necessitates a rational price system. However, the essence of the Soviet
allocation mechanics is still quantitative planning, implemented through centralized administrative controls.
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## GLOSSARY

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<td>Fondy</td>
<td>Authorizations for funded commodities.</td>
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<td>Glavk</td>
<td>A main administration of a ministry.</td>
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<td>Gosbank</td>
<td>State bank.</td>
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<tr>
<td>Gosplan</td>
<td>State planning commission.</td>
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<tr>
<td>Gosstroy</td>
<td>State construction commission.</td>
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<tr>
<td>Hectare</td>
<td>A measure of area (equals approximately 2.47 acres).</td>
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<tr>
<td>IBEC</td>
<td>International Bank for Economic Cooperation.</td>
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<tr>
<td>Khozraschet</td>
<td>&quot;Economic&quot; (or business) accounting, profit-and-loss accounting.</td>
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<td>Kolkhoz</td>
<td>Collective farm.</td>
</tr>
<tr>
<td>Kolkhoznik</td>
<td>Collective farm worker.</td>
</tr>
<tr>
<td>Krai</td>
<td>A territory, in the same sense as, for example, the Yukon Territory.</td>
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<tr>
<td>MTS</td>
<td>Motor Tractor Station.</td>
</tr>
<tr>
<td>Oblast</td>
<td>Province.</td>
</tr>
<tr>
<td>Raion</td>
<td>District (sub-unit of oblast).</td>
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<tr>
<td>RSFSR</td>
<td>Russian Soviet Federative Socialist Republic.</td>
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<tr>
<td>Sovkhoz</td>
<td>State farm.</td>
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<tr>
<td>Sovnarkhoz</td>
<td>Regional economic council.</td>
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<tr>
<td>Stroibank</td>
<td>Investment bank.</td>
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<tr>
<td>Torg</td>
<td>Wholesale trading agency in charge of a number of retail outlets.</td>
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<tr>
<td>Trust</td>
<td>An administrative agency in charge of a number of production units.</td>
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<tr>
<td>Zaiavka</td>
<td>Application form for an allocation certificate.</td>
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ACKNOWLEDGMENT

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I am also indebted to Dr. Whatarangi Winiata and Dr. Harry Purdy for struggling through a handwritten preliminary draft of this thesis. Their constructive criticisms of style and format were a considerable aid in completing the final manuscript.
CHAPTER I

INDUSTRY

The following chapter examines the three component parts of the industrial allocation system: the formulation of production-supply plans; financial planning and the role and formulation of prices; and the microeconomic targets, controls and incentives. The relationship of these variables in providing an integrated system of allocation mechanics will be investigated. The discussion will elucidate the allocative system utilized in industry during the early 1950's, prior to Stalin's death, and trace the changes that have taken place in the allocative mechanics up to the present time.

The Formulation of Annual Production-Supply Plans

The initial point in the construction of the national production-supply plan stems from a number of directives issued by the leaders of the Communist Party. Basing their decisions on the past and projected year-end performance of the economy, and their political-economic goals, the fundamental priorities of the national economic plan are formulated. Directives regarding the desired growth rates of industry and agriculture, the priority areas within these sectors, and the distribution of national income between consumption and investment are sent to the State Planning Commission (Gosplan). These directives provide the bases for the construction of a skeletal national economic plan.
The foundation of this skeletal plan is a set of source and allocation tables known as material balances. Material balances are compiled from an analysis of highly aggregated data on past input norms and output capacities, plus anticipated input-output figures of new capacity to be installed during the planned year. With these data, material balances are drawn up for broad groups of critical materials and equipment. The objective is to equate supply and demand ex ante. In the balancing process primary consideration is given to the desired output of priority sectors of the economy, then to their suppliers, and so on. Control figures for the major administrative units are then calculated from the material balances. They stipulate targets for total outputs, inputs, cost reductions, capital investments, and labour productivity, and must be approved by the Council of Ministers, U.S.S.R.

Once approval has been given, the control figures are disseminated among the various ministries.\footnote{The number of ministries have varied around twenty-five, depending on the importance placed by government leaders on particular sectors of the economy.} Previous to 1950 and up to 1957 all industrial production was administered under a branch of industry principle. Under this arrangement one ministry was ostensibly responsible for the administration of all the enterprises connected with its particular branch, for example, non-ferrous metals, machine building, etc. To facilitate the administration of these wide-spread enterprises, many ministries had intermediate administrative organizations called glavki, which in turn administered a group of enterprises.
When the respective ministries received their control figures, the various targets were disaggregated and distributed among the specific glavki under the jurisdiction of the ministry. Each glavk then repeated the process of disaggregation in assigning control figures to its subordinate enterprises.

The enterprise usually received its control figures around the beginning of June and was informed at this time of its tentative output assignments and material inputs, as well as cost reduction, labour productivity, and wage fund targets. On the basis of the control figures, the enterprise would calculate its maximum output potential, specific quantities of materials necessary to achieve this output, labour productivity and cost reduction possibilities. The above information, along with detailed orders for material inputs (zaiavki), is then delivered to the glavk, where the respective enterprises bargain with their superiors regarding the feasibility of the control figures they had previously received.

It is common practice for firms to deflate their output potentials and inflate their input requirements in order to obtain production and financial targets that they can fulfill. Past experiences of being assigned absurdly high output targets and low input norms, as well as recurring difficulties in obtaining timely deliveries of materials ordered, have resulted in this practice of understating their real potential and stock-

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1 Absurd control figures result from over-optimistic expectations and lead to the creation of taut plans. When the control figures are distributed, both ministries and glavki inflate their real assignments in order to obtain a margin of safety in fulfilling their control figures.
piling inventories. This practice is recognized by the glavki administrations, and when the zaiavki are presented to them by their respective enterprises, there ensues a process of collective bargaining. The enterprise attempts to justify a reduction in its output target and/or an increase in its material inputs, wage fund, and cost reduction targets, while the glavk tries to remove the protection that the firm has attempted to obtain. In this bargaining the glavk, as the superior organ, has final authority, while the firm has the right to appeal unresolved issues at the ministerial level.

At the glavk level the above preliminary data are aggregated for the subordinate enterprises and delivered to their ministries where the bargaining process is repeated with regard to glavk assignments. Once these issues have been resolved, the various ministries calculate their total outputs, material requirements, wage fund, cost/ruble of market outputs, research costs, and other relevant economic variables, and deliver the aggregated plan for the ministry to Gosplan, U.S.S.R. Another round of bargaining ensues between Gosplan and the various ministries over discrepancies between the tentative aggregate plan for the ministry and the initial control figures assigned. Unresolved issues at this level of bargaining are referred to the Council of Ministers, U.S.S.R., for final decision.

Gosplan then begins the complex process of revising its estimated material balances for funded commodities.\(^1\) In

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\(^1\) Up to 1959 commodities and materials were classified into four categories. 1) Funded commodities included all important producer goods, fuels, and the major inputs of light industry. All funded materials are included in the national
1957, Gosplan had to simultaneously close some 1,050 individual material balances.\(^1\) The individual balances are highly inter-related and changes in one balance cause various changes in numerous other balances. The methods used in closing the balances vary from reducing the input norms of deficit materials, or encouraging the substitution of less scarce materials, to increasing production of the deficit good; the latter alternative is used if the former ones fail.\(^2\) When 'consistent' balances have been obtained, a draft of the national economic plan is drawn up and forwarded to the Council of Ministers, U.S.S.R., and in turn to the Soviet legislature for approval.

Once the plan has been approved by the government, Gosplan distributes the various output targets, input norms, and authorizations for funded commodities (fondy) to the economic plan and are allocated by Gosplan. 2) Centrally planned commodities, included less critical goods and products used by a narrow group of consumers and were balanced and allocated by producing ministries. In 1957 the number of such goods reached 5,000. 3) Decentrally planned commodities, included goods and materials of lesser importance and were planned by producing ministries or local government organs. 4) Self-procured goods and materials, included more abundant materials, for example, sand, rocks and some types of lumber; for these materials the firm is responsible for its own procurement.


\(^2\)It is believed that increasing the production of deficit materials is used as a last resort because of the effect this will have on the balances of the inputs of the deficit commodity and on the inputs of the suppliers of the inputs of the producers of the deficit commodity, and so on. Apparently when an increase in the production of the deficit commodity is unavoidable, only conspicuous changes in the affected balances are accounted for. (Herbert Levine, "Centralized Planning of Supply in Soviet Industry", in The Soviet Economy: A Book of Readings, ed. by Morris Bornstein and Daniel Fusfeld, pp.57-58.)
various ministries in accordance with the approved plan. The ministries then disaggregate and distribute the above targets among their various glavki, along with gross allocations of fondy for centrally planned materials. The glavki in turn disaggregate and distribute detailed input and output targets along with the necessary material authorizations, in gross terms, to their respective enterprises.

When the enterprise receives its output and input targets and material authorizations, it specifies the exact requirements of the materials desired and sends these specifications back to the glavk. The glavki combine the various lists of material specifications of their enterprises and forward these combined orders to the main administration of supply attached to their respective ministries. The supply administrations in turn send specified orders to the sales administrations of the appropriate producing ministry, who in turn assign specific orders to their respective enterprises. At this stage formal contracts are signed between each firm and its suppliers, and delivery dates, methods of payment, and other relevant considerations are specified. The contractual arrangements complete the process of production and supply planning; after the contractual arrangements are completed, each enterprise formulates operational production plans with monthly breakdowns for the first quarter or one-half of the planned year.

Reforms in administration and production-supply planning in industry: 1950-1970

All of the significant reforms that occurred during this period in the planning of production-supply and administration
in industry took place after 1956. In May 1957 the ministerial organization of industry was dissolved and replaced by 104 regional economic councils (sovarkhozy).¹ Henceforth, the administration of all large-scale industry, which included all heavy industry, was to follow horizontal geographic lines rather than the previous vertical branch lines.² The sovarkhozy were subordinated to the Council of Ministers of the republic in which they were situated. Several ministries for critical areas of the economy, for example, defence and chemicals, were retained, while some other less critical but still important ministries were transformed into state committees. The administration of small-scale industry was transferred to the various oblast and local government organs.³

The rationale behind this massive reorganization in industrial administration was to correct the gross deficiencies which had become apparent in the branch system of administration. Excessive branch differentiation into more than thirty


²The criterion used was that the sovarkhozy would administer all enterprises with over 200-250 employees. (Phillipe Bernard, Planning in the Soviet Union, p.114.)

³To ease administration, small scale industrial firms in the same area, producing similar goods, were encouraged to amalgamate into 'firms' or 'producer unions'. The consolidations were supposed to bring about the following benefits: 1) easier centralized allocation of materials and equipment; 2) greater manoeuvrability of managerial and material resources; 3) larger scale production and greater standardization of output. The movement toward the amalgamation of small-scale enterprises continued after they were transferred to the sovarkhozy administrations, and were further intensified after November, 1962. (Zaleski, Planning Reforms, pp.157-158.)
ministries had lead to fragmentation of the central command structure, thereby increasing the difficulty of transmitting central directives pertaining to specific types of industry down through the administrative hierarchy. Over the years individual ministries had attempted to gain self-sufficiency through vertical integration of their production processes, the result of which lead to a dilution of the branch principle and the administrative scrambling of industries. In addition to the above problems ministerial control over the spatial arrangement of new enterprises had lead to locational absurdities, vis-a-vis suppliers and customers, resulting in excessive transportation costs. The replacement of the ministerial system by regional economic councils was an attempt to remedy the above-noted defects in industrial administration.

This total transformation of the administrative structure in industry had few major effects on the planning of production and supply of goods in the national economy. The planning hierarchy was now the Council of Ministers, U.S.S.R., Gosplan, U.S.S.R., the republican gosplani, sovarkhozy, and the enterprises. Gosplan, U.S.S.R., acquired the research departments and the main administrations of sales of the former

1An example of this administrative scrambling was the Ministry of Machine Tool Production. During 1956 it controlled only fifty-five enterprises out of a total of 171 firms whose primary task was the production of such tools. The remaining 116 enterprises were scattered among nineteen different ministries. The effect of this on conveying information and controlling the execution of directives pertaining to this industry is obvious. (Oleg Hoeffding, "The Soviet Industrial Reorganization of 1957", papers and proceedings of the 71st annual meeting of the American Economic Association, American Economic Review, Vol.XLIX (May, 1959), p.72.)
ministries, and was thus responsible for centralized production research and the planning of all inter-republic deliveries of goods and materials. At the republican Gosplan level, combined main administrations for supply and sales were formed, with each broad category of product having its own main administration. Similar main administrations were formed at the sovnarkhoz level. The effect of the above changes on the planning of production and supply was that the previous functions described for the old hierarchy were administered by the newly formed organs, while the functions performed, with certain qualifications, remained essentially the same.

One of the major benefits proclaimed for the reorganization was that the use of control figures would be abolished and the planning process would be initiated at the enterprise level. Each enterprise would formulate its own preliminary targets, based on the major indicators given to each enterprise in its long-term perspective plan. Due to the frequent and recurring changes that were made in the long-term plans, the indicators used by the enterprise were often not appropriate; thus the new planning scheme was never realized. New target figures had to be established every year and control figures still remained the basis for calculating the preliminary enterprise plans.

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1 The seven-year plan for the development of the economy was disseminated down through the hierarchy until each firm had its own seven-year plan. Once the perspective plan for the firm was approved, it was to use this as a basis for establishing its own preliminary targets.

Changes in the planning of the output assortment of consumer goods industries occurred during and after 1957; previous to this time the output mixes of these industries were targeted by the central authorities. From its initial application in 1957, and increasingly in the years following, the assortment targets of light industries were finalized on the basis of negotiations held between the producing firm, trade organizations, and retail outlets. Each year separate trade fairs were held in most republics for each branch of the consumer goods industry. The negotiations that followed these fairs between the producer and the distributors were used to finalize the assortment mixes of the various producing firms.

Several other reforms were undertaken in 1957 that gave the sovnarkhozy greater control over decentralized investments, relative to the freedom that had been allowed to the previous ministries in this area. In addition, the sovnarkhozy were permitted to reallocate their gross allocations of fondy among their subordinate enterprises as they saw fit. This delegation of authority to the sovnarkhoz level was short lived. In 1959 a directive by the central government ruled that the sovnarkhozy would henceforth require higher approval for their distributions of fondy among their subordinate enterprises.¹ A similar retrenchment of centralized control occurred in 1961 when the sovnarkhozy's control over decentralized investments was severely limited.²

² Ibid.
During 1960 and for several years following, the administrative structure of industry was continually modified in an attempt to find an acceptable form of industrial organization. In 1960 a large part of light industry, previously subordinated to various oblast and local government authorities was transferred to the jurisdiction of the sovnarkhozy.¹ During the latter part of the same year three of the largest republics in the Soviet Union created republican sovnarkhozy, responsible to their republican gosplani, for the operational control and material supply coordination of the sovnarkhozy within their respective republics.² This movement toward greater coordination among the sovnarkhozy was further intensified in 1961 when the U.S.S.R. was divided into seventeen large economic regions and administrative bodies were set up to coordinate the economic activities of the sovnarkhozy within each region. In November 1962 the number of sovnarkhozy was reduced from 104 to forty-seven and a new agency called Sovnarkhoz U.S.S.R. was created and made responsible for the implementation of plans in the forty-seven sovnarkhozy.³ The above reorganizations proved to be unsatisfactory, and in March 1963 the Supreme Economic Council was created to coordinate the three major organs of economic administration.⁴ The above arrangement

¹Ibid. p.1.

²Republican economic councils were set up in the RSFSR, Ukraine, and Kazakhstan.

³Bernard, Planning in the Soviet Union, p.147.

persisted up to the massive economic reforms that were undertaken in November, 1965. At this time the regional economic system of administration was dissolved and the old ministerial branch system, similar to that which existed previous to 1957, was re-established.

The re-establishment of the ministerial system of administration was among the first major changes that took place in the Soviet economy after the fall of Khrushchev. The new leaders were dissatisfied with the performance of the economy in recent years and believed the regional system of industrial administration was partially responsible for the recent decline in the growth rate of the economy. Specifically, the criticisms voiced against the sovnarkhozy system was that the wide dispersion of administrative power had lead to a dilution of centralized control and monumental problems of coordination; in addition; the system had exhibited a distinct tendency toward regional autarky. The greater degree of vertical integration of industries that was inherent in the regional administrative system, had correspondingly increased the tendency toward self-sufficiency in intra-regional production and supply activities. It was for these reasons that the sovnarkhozy system was replaced in September, 1965 by some twenty-three newly created ministries.¹

The restoration of the ministerial administrative system returned the production-supply planning system to its pre-1957 form. Since the 1965 reforms, the major changes that have been

undertaken in the production-supply system have been a reduction in the number of centrally planned goods and the introduction of input-output balancing techniques. After the creation of the sovnarkhozy system, the division between funded commodities and centrally planned goods lost its previous significance, the majority of centrally planned goods being balanced and allocated by Gosplan, U.S.S.R. By July 1966 the number of centrally planned and allocated commodities had exceeded 20,000. At this time, due to the excessive burden of planning for such a vast number of goods, 6,000 goods were to be distributed in a decentralized manner by regional material-equipment supply agencies.

Input-output techniques have been increasingly used in the recent past as a supplement and alternative to material balancing techniques. The crude system of material balancing does not facilitate feasible accounting procedures for following the indirect effects created in related material balances of changes in any one material balance. The inability of material balancing procedures to adjust for the cyclical ramifications that a change in one material balance creates in other related balances has been the primary source or reason for the recurring inconsistent annual plans that have plagued the Soviet economy. Input-output techniques lend themselves to computer calculations and can theoretically account for the direct and indirect effects of altered factor inputs and outputs.

1 See n.1, pp.4-5. 2 Zaleski, Planning Reforms, p. 105. 3 Ibid.
Input-output techniques were first introduced in 1962 to check the consistency of the annual plan after it had already been approved. Similar work was done on the 1963 plan and the two-year plan for 1964-1965. Since this time input-output techniques have been used in concert with the material balancing methods in the construction of annual plans, but the latter method still remains the dominant technique used to achieve an ex ante balance in the supply and demand of centrally allocated materials and equipment.

Financial Planning and the Role and Formation of Prices in the Soviet Economy

Financial planning

Financial Planning is used to supplement the system of physical controls in the management of the economy. Although physical controls play the predominant role in Soviet allocation mechanics, financial planning is necessary for the formulation of monetary and fiscal policy. In addition, financial plans provide the major means for policing the execution of non-financial plans as well as checking on the validity of these physical plans. It is the physical plans and the implications of these plans on the economy that provide the basis for the construction of the primary financial plans, viz., the cash plan, the credit plan, and the state budget.¹

Cash planning largely consist of balancing the volume

¹Other financial plans are incorporated into the budget, for example, 'estimates' of budget financed enterprises and institutions.
of monetary income received by the population with the volume and structure of monetary expenditures made by the population. The dynamics of inter-enterprise monetary transactions do not enter the cash plan, as the settlements that take place between firms in the socialized sector in the buying and selling of goods are not done by exchanges of currency but by transfers of book accounts through Gosbank. The currency available to any enterprise is rigidly controlled, and enterprises are prohibited by law from paying cash for any purchases exceeding 1,000 rubles.¹

The cash plan of Gosbank is an aggregated and simplified form of the cash plan of each of the districts and regions of Gosbank's local district offices. At each of these offices an 'enlarged' plan of the balance of monetary incomes and expenditures is drawn up in terms of specialized groups, e.g., factory workers, office workers, peasants, professionals, and other work categories. This enlarged plan shows the money flows between the socialized sector and the population vis-a-vis these groups, and the return flow back (in addition to the money turnover between social groups selling products or services to one another through market transactions). The balancing of the incomes and expenditures of the population for each individual region, not only facilitates the estimation of aggregate demand for consumer goods in the region, but also lends itself to planning the differentiation of real wages between regions.

¹ Joseph Berliner, "Monetary Planning in the U.S.S.R.", American Slavic and East European Review, Vol.XXIX, (December, 1950), p.240. The problem of controlling enterprise transactions that take place by the transferring of accounting balances is a separate problem and will be discussed in the section on microeconomic controls in industry.
An abbreviated version of the above plan that does not contain the information on social groups is forwarded by all of the district offices of Gosbank to Gosbank headquarters. All of the various district plans are then compiled into an overall cash plan for the economy.

A simplified scheme of Gosbank's cash plan is shown below:

<table>
<thead>
<tr>
<th>(I) Payments Received in Cash</th>
<th>(E) Payments Made in Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trade (state as well as cooperative trade), and eating houses. (Accounts for approximately 75 percent of payments.)</td>
<td>1. Remuneration of labour and other sources of personal income, including wages, salaries in industry and commerce, stipends, subsidies, old age pensions, money wages of kolkhoz farmers, etc. (Accounts for approximately 90 percent of cash payments.)</td>
</tr>
<tr>
<td>3. Deposits of the savings banks with Gosbank (if positive). Post Office, telegraph, etc. (final expected balances, if positive).</td>
<td>3. Deposits of the savings banks with Gosbank (if negative). Post Office, telegraph, etc. (final expected balances from operations, if negative).</td>
</tr>
</tbody>
</table>

---

4. The balance of cash at the beginning of the planned period.

4. The balance of cash at the end of the planned period.

5. Planned increase of cash, i.e., planned transfers of notes from the issue funds of the district offices concerned.

5. Planned decrease of cash, i.e., planned transfers of notes to the issue funds of the district offices concerned.

The data used in the compilation of the cash plans of the district offices and Gosbank are largely provided by the national economic plan and the state budget for the previous period,¹ which are then adjusted accordingly. The total amount of net personal income is derived from the figures of the total wage funds in the national economic plan plus the budgetary figures on government transfer payments. The planned increase (decrease) of cash in circulation is derived from the credit plan and is based on the volume of output of consumer goods and the planned velocity of retail trade turnover, including estimates of consumer credit granted by retail outlets.

The primary objective in constructing the cash plan is to provide for the stability of the currency. The cash plan consolidates various portions of other plans and balances that affect the amount of money in the hands of the population and the utilization of these monies by the populace. By balancing inflows and outflows of cash to and from the population, the government can plan for the stability of the currency. Since the cash plan is largely a 'synthetic' plan that incorporates many other plans, the ex post stability of the currency is

dependent upon the fulfillment of the totality of other plans which are incorporated into the cash plan. Thus the cash plan also provides a measure of control over the fulfillment of the other plans which are incorporated into it, as deviations in these plans will result in deviations in the cash plan.

The credit plan is of critical importance to the financial equilibrium of the economic system in that it influences the amount of money at the disposal of state institutions and in the hands of the general public. The function of the credit plan is to 'mobilize the idle resources of the economy' and to provide a comprehensive control mechanism over the economic (financial) activities of state enterprises.

The objective of Gosbank in its compilation of the credit plan is to balance the supply of credit resources with the demand for these resources. The supply of credit is determined by: the extent of the bank's reserves; the current budget surplus; past budget surpluses held on deposit by the bank; and the amount of other non-active deposits. Non-active deposits are based on the minimum balance on hand at the end of an operative planning period.¹

Planning the distribution of credit available involves both the aggregation of quantifiable or planned credit needs (used primarily to finance inventory requirements), and estimates on non-specific but recurring credit requirements. The aggregation of planned credits to firms is effected in the following manner: each enterprise has already been allocated a

charter fund of fixed and working capital to use in meeting its assigned targets: the customary practice followed is that the working capital funds granted to the enterprise under its charter fund tends to approach the minimum balance required for any single period during the planned year.¹ Throughout the planned year the firm's working capital requirements will fluctuate above, (and occasionally below), the level of their own financial resources according to their production requirements. The function of bank credit is to provide the difference between the maximum working capital requirements and the enterprise's own funds, based on each enterprise's planned receipts and expenditures. The credit demands of each enterprise is calculated in the above manner and are sent up the administrative hierarchy where they are checked at each level of aggregation and finally forwarded to the Ministry of Finance.

Other types of credits allotted to firms cannot be planned in detailed form, for example, loans for goods in transit are planned only as a general sum, based on indices of the national economic plan. The following table shows the major types of bank loans outstanding on January 1, 1956, as a percentage of total bank loans.

The interest rates charged for the above loans are differentiated slightly, depending on its category. In general, the interest rates are meant to cover administrative costs, and

¹What the central authorities attempt to achieve is to restrict the level of funds available to the enterprise during any period of the planned year, after giving due consideration to the costs of administering credit requirements.
do not reflect scarcity or risk factors.

**TABLE I**

**DISTRIBUTION OF BANK LOANS OUTSTANDING, AS OF JANUARY 1, 1956**

<table>
<thead>
<tr>
<th>Use of Credit</th>
<th>Percentage of Total Bank Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw materials, supplies, finished goods</td>
<td>64.9</td>
</tr>
<tr>
<td>Wages, unfinished production, technical improvements</td>
<td>1.8</td>
</tr>
<tr>
<td>Goods in transit</td>
<td>25.5</td>
</tr>
<tr>
<td>Other (including past due loans)</td>
<td>7.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>


**TABLE II**

**INTEREST RATES ON VARIOUS TYPES OF BANK LOANS**

<table>
<thead>
<tr>
<th>Category of Loan</th>
<th>Interest Rate Charged**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans for goods in transit</td>
<td>1%</td>
</tr>
<tr>
<td>All other short-term loans</td>
<td>2%</td>
</tr>
<tr>
<td>Overdue loans</td>
<td>3% - 5%</td>
</tr>
</tbody>
</table>


**Interest rates were those in effect during the early 1960's.

After the credit plan is approved by the Council of Ministers, U.S.S.R., the 'planned credits' are disaggregated into 'credit limits' for the various ministries (sovnarkhozy) and eventually into credit limits for each individual enterprise via the appropriate branch banks. Non-planned credits are assigned to the various offices and branches of Gosbank, based
on assessments of their requirements.¹

Up until 1959, the long-term credits distributed by Gosbank and the numerous 'special purpose' banks that existed up to that time were included in an all-encompassing credit plan. Beginning in 1959, when Gosbank absorbed the functions of most of the special purpose banks, the long-term credit plan has been drawn up as a separate document. Since the implementation of the 1965 reforms, which replaced the bulk of capital investment grants with repayable long-term credits, the long-term credit plan has assumed a far greater importance and at present requires the specific approval of the Council of Ministers, U.S.S.R.

The state budget is the pivotal point of the Soviet financial system. The budgetary planning process closely follows the procedures used in compiling the national economic plan.² The Ministry of Finance, U.S.S.R., compiles a draft balance sheet of revenues and expenditures based on directives received from the government and the draft targets of the annual economic plan. The government directives indicate the breadth of coverage desired by each budgetary level; the main directions of expenditures; norms for items of expenditure, i.e., capital investment, social and cultural measures, costs of administration, defence, etc.; and the changes in and methods of calculating budgetary revenues. On the basis of the above-mentioned directives and preliminary balances, the Ministry of Finance,

²See Appendix I.
U.S.S.R., issues appropriate preliminary targets and instructions to the All-Union ministries and agencies financed from the national budget and to the republican ministries of finance. The republican ministries of finance in turn issue similar instructions to their respective regional and territorial finance agencies, the latter bodies then formulating appropriate guidelines for all lower-level financial bodies within their respective jurisdictions. Simultaneously the republican ministries of finance calculate draft republican budgets on the basis of aggregate financial plans and estimates calculated by their respective ministries and agencies, and forward their consolidated draft budgets to the All-Union finance ministry. The Ministry of Finance, U.S.S.R., by this time has also received the summary financial plans and estimates of the All-Union ministries and agencies. After having checked the conformity of these plans and estimates with the preliminary economic plans, the finance ministry compiles a draft of the Union budget. Once the preliminary drafts of the consolidated republican budgets have been accepted, the Ministry of Finance then combines the budgets of the Union Republics, and the draft budget for social insurance into a draft of the consolidated budget of the U.S.S.R.

The preliminary consolidated budget is then delivered to Gosplan and to the Council of Ministers, U.S.S.R. The responsibility of Gosplan is to check the conformity of the budget to their draft of the national economic plan, which they have completed by this time. The conformity and deviations of the budget to the national economic plan is ascertained by compiling
a consolidated financial plan for the entire economy. The scheme of the consolidated financial plan is shown below.

**TABLE III**

OUTLINE OF THE CONSOLIDATED FINANCIAL PLAN OF THE U.S.S.R.*

Financial Resources

1. Monetary accumulation made by socialist enterprise.
   a) Profit (Net profit in terms of economic branches).
   b) Turnover tax (based on predicted sales of products and average tax rates on these products).

2. Receipts from enterprises and institutions under the social insurance scheme.

3. Depreciation outlays (is determined by estimating the average annual volume of operating fixed assets and multiplying by an average rate of depreciation).

4. Foreign trade gains.

5. Other receipts from the socialist economy (forestry income, amusement taxes, etc.).

6. Monetary receipts from the population.
   a) Compulsory payments (includes income and agricultural taxes).
   b) Voluntary payments (includes deposits made by the population in savings banks and the quasi-compulsory purchase of bonds, which were discontinued in 1957).

7. Other revenues (includes foreign loans, etc.).

Utilization of Financial Resources

1. Capital investments in the national economy (based on investment plan and estimated costs of construction).

2. Decentralized capital investments.

3. Overhauling fixed assets (planned according to the portion of the depreciation reserve allocated for such purposes).

4. Increment to current assets (includes investment in production reserves, e.g., raw materials, in-process inventory, finished goods in stock, etc.).

*Source: Dundukov, "Financial Balances", p.125.*
5. Increment to state material resources (includes the total inventories held at the various levels within the administrative hierarchy to cushion the effects of inconsistent or unfulfilled plans).

6. Other economic expenditures (includes drafting and designing expenditures, expenditures on geological prospecting, irrigation, etc.).

7. Allocations for education, health, pension and allowances.

8. Allocations for science (excluding capital investment).


10. Expenditures on general government and administration (calculated on the basis of average salary, times the number of employees, plus administrative expenditures; capital construction costs are excluded).

11. Other state expenditures.

12. Reserve fund.

13. Expansion of bank facilities for national economic credit.

Gosplan submits its recommendation regarding the budget and the final draft of the national economic plan to the Council of Ministers, U.S.S.R., about the same time as they receive the draft of the consolidated budget from the Ministry of Finance. The budget and the national economic plan are then approved simultaneously by the Council of Ministers, forwarded to the legislature for approval, after which they achieve legal status.

A simplified scheme of the plan for the 1968 consolidated budget of the U.S.S.R. is shown below.

The downward dissemination of the budget begins before final approval, usually after the Ministry of Finance, U.S.S.R., has completed its preliminary draft of the consolidated budget. The budget is passed down and disaggregated through the financial
administrative hierarchy and necessary adjustments are made to the republican, regional, territorial and other lower level draft budgets. Modifications made to the preliminary consolidated budget in the course of its ratification are subsequently passed down and appropriate adjustments are made at the various budgetary levels.

**TABLE IV**

**PLAN FOR THE CONSOLIDATED BUDGET OF THE U.S.S.R. - 1968**

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Billion Rubles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Financing the national economy</td>
<td>50.1</td>
<td>40.5</td>
</tr>
<tr>
<td>a) Industry</td>
<td>23.9</td>
<td>19.3</td>
</tr>
<tr>
<td>b) Agriculture</td>
<td>9.0</td>
<td>7.3</td>
</tr>
<tr>
<td>c) Other</td>
<td>17.2</td>
<td>13.9</td>
</tr>
<tr>
<td>2) Social-cultural services</td>
<td>45.7</td>
<td>36.9</td>
</tr>
<tr>
<td>a) Education</td>
<td>21.0</td>
<td>17.0</td>
</tr>
<tr>
<td>b) Health</td>
<td>7.6</td>
<td>6.1</td>
</tr>
<tr>
<td>c) Social Welfare</td>
<td>17.1</td>
<td>13.8</td>
</tr>
<tr>
<td>3) Defence and Administration</td>
<td>28.0</td>
<td>22.6</td>
</tr>
<tr>
<td>a) Defence</td>
<td>16.7</td>
<td>13.5</td>
</tr>
<tr>
<td>b) Administration</td>
<td>1.5</td>
<td>1.2</td>
</tr>
<tr>
<td>c) Other</td>
<td>9.8</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>123.8</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Revenues**

| From enterprises                      | 112.7          | 91.3       |
| a) Turnover tax                       | 42.2           | 34.2       |
| b) Profit deductions                  | 43.8           | 35.5       |
| c) Income tax on collective farms, social insurance, other | 26.7 | 21.6 |
| 2) From the population                | 10.8           | 8.7        |
| a) Income tax                         | 10.3           | 8.3        |
| b) Other                              | 0.5            | 0.4        |
| **Total**                             | **123.5**      | **100.0**  |


The implementation of the budget is based on, and con-
trolled by 'budget schedules', which are comprehensive final plans of the revenues and expenditures of the respective budgets, broken down into quarter years. The schedules are compiled after final ratification of the consolidated budget; the necessary adjustments have been carried out and are based on the fully detailed plans and estimates submitted to the various finance organs.

The disbursements of cash from the various budgets and the techniques used to control the flow of budgetary funds differ according to the level at which budget appropriations are made. At the All-Union and Union Republican levels budgetary grants are made by opening 'budgetary credits' in the name of the heads of agencies receiving the credits who act as credit administrators. Budgetary credits are assigned quarterly, any year-end surpluses being returned to the budget. The credit administrator may utilize the funds allotted in meeting the planned objectives of his agency or may reassign a portion of the funds to subordinate agencies as he sees fit. Control of budgetary receipts and expenditures at the All-Union and Union Republican levels is maintained by Gosbank by means of extensive reports from its various branch offices which maintain accounts for budgetary receipts and/or expenditures.

At the local level, budget appropriations are made on the authorization of the local finance organs. Control of local budgetary receipts and expenditures are maintained by a single

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1The principal credit administrators for the All-Union and republican budgets are the ministers and heads of other central government departments and institutions.
branch bank of Gosbank, where all the budgetary revenue and expense accounts for the locality are centralized.

Gosbank compiles monthly reports on the changes of the revenue and expenditure accounts of the various budgetary levels and submits these accounts to the Ministry of Finance, U.S.S.R. In this way the financial position of all state enterprises and institutions are subjected to the continual surveillance of the banking and fiscal authorities.

The role and formation of prices in the Soviet economy

The need for a price system in a centrally planned economy where many of the goods are administratively allocated arises out of the need for a common unit of account. Even if all the goods in the economy were physically allocated, without resorting to an abstract unit to record the flow of goods, any method of accounting would prove unfeasible in a diverse economy producing an immense variety of goods. Aside from their accounting function, prices also play an important role in the allocation and distribution of the national income; in a very restricted sense, they are also a factor in the allocation of resources. The above-mentioned functions of prices are operative to some degree throughout the economy but their relative functional importance varies depending on which area of the economy one is examining. Generally it may be said that the primary purpose of the Soviet price system is that of providing for the control of economic processes.

In this section of the paper the discussion will center primarily on the roles and formulation of prices for industry
and, to a lesser extent, for consumer goods.¹ In both heavy and light industry, prices provide a method of controlling the activity of enterprises through financial accounting. Although each firm is faced with a multitude of physical targets, it is impossible to control and evaluate these norms in physical quantities. Prices provide the means for aggregating heterogeneous inputs and outputs. Thus by making each enterprise pay for services received, the overall performance of the enterprise can be evaluated as well as specific performance regarding its inputs and outputs.

The control function of prices in industry has led to a dual price system in this sector of the economy. "Constant prices' are used for intertemporal comparisons of outputs and costs for individual enterprises, groups of enterprises or branches of industry. "Current prices' are used in recording the transactions of each enterprise; they also facilitate the evaluation of enterprise cost structures, being based on current average costs. Constant prices are revised over time and will be the same as current prices when the base year is re-established; from this point the two price lists will diverge with the alterations of current prices and the introduction of new commodities, until the constant prices are revised again.²

The allocative role of prices in industry varies

¹For a more detailed discussion of retail prices, see pp.99-103.

²Prices of new commodities are 'provisional prices' which are expected to decrease as production difficulties are mastered. Once production procedures have been established, the calculated price is entered into the current price catalogue.
according to the administrative level being considered. Capital output ratios, as well as 'estimate prices' used in planning future investments, influence planners in their selection of alternative investments. Design planners are also influenced by the above variables in deciding what production functions new enterprises will have, and also in decisions as to the potential benefits of modernizing old plants or in incorporating new innovations into existing enterprises. In the material balancing process, prices are used as guides in closing the deficit balances where substitutes exist, the more expensive commodities being directed towards higher priority uses. At the enterprise level the manager is faced with a host of physical and value targets, and the specificity of these targets vary. Prices do influence decisions at the enterprise level, particularly in the areas of input substitution and the assortment of outputs, within the limited freedom allowed by the somewhat aggregated targets faced by the enterprise.

Although prices do influence decision making at the top levels, it is recognized by the planners that relative prices do not necessarily correspond to relative scarcity values, with the exception of groups of products that are easily substituted for each other. For this reason financial evaluations will likely play a dominant role in the decision making process only if the relevant prices have been 'adjusted' to approximate their scarcity values. The use of non-adjusted prices mainly serve to supplement the basic physical tools and to facilitate accounting procedures.

Three major exceptions to the allocative role of prices
in the economy are the use of wage prices in the distribution of labour, the selling prices set for consumer commodities sold by state and cooperative retail outlets, and the 'free' prices found in the kolkhoz markets. Planning for the distribution of labour in the economy is done by drawing up a balance of labour resources and labour requirements of the economy which are based on long-term economic plans. The labour requirements are then disaggregated into specific categories by age, level of skill or education required, and the required spatial distribution of the labour force. Wage levels are then set on the basis of educational or skill requirements and also on that of the requisite geographical distribution. Thus the labour force is allocated into the desired occupational requisites of the economy by providing the necessary material (wage) incentives to ensure the desired distribution.¹

Retail prices of consumer goods sold by the state are determined and fixed 'roughly' on the basis of supply and demand. In the kolkhoz markets prices are free to fluctuate on the basis of supply and demand; hence it is seen that relative price levels are the determining principle in the allocative mechanisms of both retail trade and the kolkhoz markets.

Prices also provide the major means for distributing the national income. The prices of almost all consumer goods and some industrial goods include a turnover tax, which along with enterprise profits, provide the main source of accumulation

¹The labour market in the Soviet Union is in fact an imperfect market due to the inadequate dissemination of information regarding employment opportunities.
for the state budget. Through the manipulation of retail prices, the Soviet planners have been able to keep the real income of the population low, thus achieving a high rate of labour participation along with a high rate of accumulation.

The formulation of industrial wholesale prices

Industrial wholesale prices apply to all goods that are transferred within the state sector of the economy. All manufactured goods, raw materials, semi-fabrics, agricultural procurement prices, and the prices paid by the state to foreign trade agencies are included under this general heading of industrial wholesale prices.

Industrial wholesale prices are differentiated into five groups: enterprise wholesale prices; industry wholesale prices; settlement prices; prices of own procurement; and local wholesale prices. Enterprise and industry wholesale prices as well as settlement prices are fixed by national or regional State Planning Committees, while the latter two categories of prices are fixed by local authorities.

The enterprise wholesale price is that price at which the producing enterprise sells its output. Two principal components make up these prices; the planned branch average cost of production for the product, and a profit markup. The planned branch average cost of production for any commodity approximates the weighted average costs of production of the enterprises producing the good, but excludes those firms with the highest production costs from the weighted average. Production costs are based on labour costs (both direct and indirect labour,
including wages, salaries and social insurance payments), deprecia-
tion charges, transportation charges (if they were borne by
the seller), interest charges on short term credits that are
planned to supplement the working capital of the enterprise,
and various overhead charges that are allocated to the product.

The profit markup of the enterprise is calculated on the branch
average cost of production. The profit markup was calculated
to provide profits of approximately 5 percent for the industry
as a whole. Consequently, at the enterprise level planned
profits ranged from planned losses for the higher cost pro-
ducers to profits much in excess of 5 percent for the lowest
cost producers.

The utilization of planned and unplanned profits will be
extensively examined under the section on the micro planning
of industry. At this point it is sufficient to note that enter-
prise profits are distributed among four alternative uses:
contributions to the state budget by means of a profit tax;
withdrawals to special enterprise incentive funds; supplements
to the working capital of the enterprise (to the maximum amount
stipulated by its charter fund); and contributions to its in-
vestment fund.

The industry wholesale price is that price charged by

\[\text{1 Overhead charges include fuel and light, postage, ex-
penditures on workers' housing and education, and the like. De-
pletion allowances for extractive industries, and ground rents
for all enterprises are not included as costs of production.
Similarly, charges for invested capital were also excluded from
cost calculations prior to the 1965 reforms.}\]

\[\text{2 Morris Bornstein, "The Soviet Price System", in The
Soviet Economy, ed. by Morris Bornstein and Daniel Fusfeld, p.84.}\]
the industry sales organizations to state buyers. The industry wholesale price is derived from the summation of the following items: the branch average enterprise wholesale price; the turnover taxes applicable to the product; the profit markup of the branch sales organization; and the transportation costs (if borne by the sales organization and not the buyer).

An outcome of the practice of setting enterprise wholesale prices at approximately the average costs of the branch enterprises is that within the branch there will be many enterprises with planned profits that exceed the 5 percent profit level (as well as many enterprises with planned losses). The problem arising out of the inequality of profits is that enterprises with high profits are less subject to financial discipline.

To mitigate the above disadvantage of average pricing in those industries where sharp cost variations occur among the enterprises, an alternative system of settlement prices is frequently used. These prices are essentially accounting prices set between the branch of industry sales organization and the individual enterprises. Thus lower settlement prices are paid to high profit enterprises (vis-a-vis the enterprise wholesale price) to remove the excessive profits that would otherwise accrue to these enterprises.

'Own procurement prices' are those prices paid by enterprises for scrap and local raw materials utilized in manufactur-

1 Settlement prices are particularly used in petroleum, coal, cotton ginning and the cement industries as these industries are subject to wide cost variation.
ing processes or in the construction of social facilities for the workers. Local wholesale prices are those prices charged by the enterprise in selling output that was produced from its own scraps and waste or from materials procured from local sources at 'own procurement prices'.

Reforms in financial planning and pricing in the Soviet Union: 1950-1970

All of the significant reforms that took place in the Soviet financial system during this period occurred during the 1960's. The 1955 revision of industrial wholesale prices had minor significance in that there was no fundamental change in price formulation. Prices were altered to reflect the change in the cost structure since the time of the last revision in 1949.

The revision of wholesale prices for heavy industry and transportation that was effected in 1963 was carried out to reflect the changing cost structure and the concomitant changes in the calculation of costs, with their consequent effects on prices. In addition, relative price levels were set with a greater sensitivity to the allocative role of prices in implementing desired substitutive changes in the economy.

The net effect of the reform on the level of wholesale prices for heavy industry was a minor decrease of about 3 percent.\(^1\) The structure of prices within heavy industry was markedly altered to reflect increasing costs in the extractive industries and decreasing costs in other industries that had been

engendered by the latter's increased productivity since 1955. The following table details the degree of change that took place in the price structure.

**TABLE V**

<table>
<thead>
<tr>
<th>Branch of Industry</th>
<th>Percentage Change in the Average Branch Price Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>+30.0</td>
</tr>
<tr>
<td>Nonferrous ores</td>
<td>+15.0</td>
</tr>
<tr>
<td>Ferrous metallurgy</td>
<td>+8.5</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>+2.0</td>
</tr>
<tr>
<td>Oil</td>
<td>-7.0</td>
</tr>
<tr>
<td>Gas</td>
<td>-10.0</td>
</tr>
<tr>
<td>Machine building</td>
<td>-10.0</td>
</tr>
<tr>
<td>Chemicals</td>
<td>-14.5</td>
</tr>
<tr>
<td>Electric power</td>
<td>-15.0</td>
</tr>
<tr>
<td>Railway freight</td>
<td>-20.0</td>
</tr>
</tbody>
</table>


The above price changes cannot be attributed strictly to changes in costs. The objective of the reform, in addition to providing a 'normal level of profitability' for the branch as a whole was to adjust the relative prices to reflect the structural changes that had occurred in the economy. Increased awareness of the allocative affect of prices in the planning process was partly responsible for the marked shift in the price structure of fuels, due to their high intersubstitutive character. Relative prices of the various outputs within each branch were also altered to promote greater adherence to the output mix targets assigned to each enterprise.

The price changes also reflected two alterations made in
calculating the average costs of the enterprise. Amortization allowances were increased to a more realistic level and were based on the revalued levels of fixed assets that were calculated earlier in the same year. Geological prospecting expenses attached to the extractive industries were now included in the calculation of costs for the enterprises.

The major reforms in the financial system occurred after the fall of Khrushchev in 1964. One of the most significant changes, introduced after the October, 1965 reforms, was the reduction of non-repayable budgetary grants used for financing investments. During 1965, budgetary grants had provided the bulk of investment funds, financing 43.0 billion rubles of the gross 1965 investments of 48.3 billion rubles; the remaining 5.3 billion rubles were financed from 'decentralized funds' and bank credits.\(^1\)

After a transitional period necessary for price adjustments, the bulk of investment in productive fixed capital was to be financed from the internal resources of the enterprise and through long-term bank credits. The target figure set for 1967 was that 25 percent of such investments should be financed by the above-mentioned means.\(^2\)

Under the new method of self-financing investments, the 'fund for development of production' had three sources of financing: a portion of the enterprise profits; the portion of the

\(^1\)Zaleski, Planning Reforms, p.144. The figure for the gross 1965 investments include private and collective farm investments.

\(^2\)Ibid.
amortization allowance that had previously gone to the centralized investment fund; and proceeds from the sale of unused equipment (which had previously been taken by the state). In addition to the above-mentioned reductions in budgetary grants to enterprises for investment, budgetary grants were eliminated as a method of financial resuscitation for firms. Budgetary grants had previously been used to subsidize enterprises in cases of unfulfilled profit plans and for unplanned losses. After the reform, this practice was discontinued and replaced with the granting of repayable credits from the state bank.¹

The most significant change in the Soviet financial system that arose from the 1965 reform was a capital charge levied against the enterprise gross profits. The capital charges were calculated as a percentage of the average value of the enterprises' fixed and 'own' working capital for the planned year.² Up until this time, the Soviet Union had been particularly opposed on ideological grounds to formally recognizing the cost of capital. Even at this juncture in their history, the capital charge, which is tantamount to interest payments, was a deduction from gross profits rather than an addition to costs.

Microeconomic Planning: Targets, Incentives and Controls

1 Planned losses are still reimbursed by budget subsidies.
2 The above charges are discussed more fully under the section on microeconomic planning.
assigning of targets to each enterprise, incentive schemes to encourage the fulfillment of these targets, and controls over the enterprise which are meant to ensure the proper conduct of the firm in its productive and financial activities and indicate deviations from the assigned targets.

In the preceding part of the paper on the formulation of annual plans, the planning process for industry was described in detail. A preliminary draft of the national economic plan is disaggregated as it is passed down the administrative hierarchy to the enterprise level. At this point the enterprise drafts its preliminary plans based on the control figures assigned, and negotiates any change in its assigned targets with its superior administrative agency. After approval, the draft plans are passed back up the hierarchy, where they are aggregated and eventually consolidated into the integrated national plan for the economy. The plan then flows down the hierarchy to the enterprise, following approval by the government and party leaders. The enterprise accordingly drafts detailed production and financial plans in compliance with the directives assigned.

The following table of major plan indices indicate the numerous targets that were assigned to enterprises on the basis of the disaggregated economic and financial plans.

The various targets assigned to the enterprise had different priorities attached to them as they varied considerably in importance. Priority indices, namely those regarding gross output, cost reductions, and wage fund limits were reinforced by a system of sanctions and incentives to provide appropriate responses from enterprise managers. Since these same indices
provided the basis for managerial evaluation and rewards, the remaining indices assumed secondary importance.

**TABLE VI**

**MAJOR PLAN INDICES ASSIGNED TO FIRMS**

<table>
<thead>
<tr>
<th>Output</th>
<th>Technical progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>- gross output</td>
<td>- installation of new equipment</td>
</tr>
<tr>
<td>- marketable output</td>
<td>- starting up new processes</td>
</tr>
<tr>
<td>- output composition</td>
<td>- improvement of processes</td>
</tr>
<tr>
<td>assortments</td>
<td>- new product design</td>
</tr>
<tr>
<td>new products</td>
<td>- prototype building</td>
</tr>
<tr>
<td>improvement of products</td>
<td></td>
</tr>
<tr>
<td>subcontracted output</td>
<td></td>
</tr>
<tr>
<td>Labour productivity</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td></td>
</tr>
<tr>
<td>- production costs of marketable output</td>
<td></td>
</tr>
<tr>
<td>- expenditures per ruble of marketable output</td>
<td></td>
</tr>
<tr>
<td>- percentage cost reduction</td>
<td></td>
</tr>
<tr>
<td>- unit costs of major goods</td>
<td></td>
</tr>
<tr>
<td>Accumulation</td>
<td></td>
</tr>
<tr>
<td>- turnover tax</td>
<td></td>
</tr>
<tr>
<td>- profit</td>
<td></td>
</tr>
<tr>
<td>contributions to budget and state</td>
<td></td>
</tr>
<tr>
<td>share remaining in firm distribution among various funds</td>
<td></td>
</tr>
<tr>
<td>percentage of profit (to cost)</td>
<td></td>
</tr>
<tr>
<td>Depreciation and its apportionment</td>
<td></td>
</tr>
</tbody>
</table>


The system created to stimulate the fulfillment of plan targets differed between managerial personnel and workers; for managerial personnel the primary criterion for the payment of bonuses was the fulfillment or overfulfillment of the gross output target (as well as fulfilling the target for cost
The following table indicates the premiums paid to the various managerial levels as a percentage of their basic salary.

<table>
<thead>
<tr>
<th>TABLE VII</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREMIUMS FOR PLANT MANAGEMENT</strong>*</td>
</tr>
<tr>
<td>(percentages of basic salary)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>For fulfillment of production target by</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Group I</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Machinery</td>
</tr>
<tr>
<td>Automotive transport</td>
</tr>
<tr>
<td>Coal Mining</td>
</tr>
<tr>
<td>Chemical</td>
</tr>
<tr>
<td>Senior management (director and chief engineer)</td>
</tr>
<tr>
<td>Intermediate management (deputy directors, shop and departmental chiefs)</td>
</tr>
<tr>
<td>Machinery</td>
</tr>
<tr>
<td>Automotive transport</td>
</tr>
<tr>
<td>Junior management (deputy shop and department chiefs, senior engineers, senior foreman)</td>
</tr>
<tr>
<td>Machinery</td>
</tr>
<tr>
<td>Automotive transport</td>
</tr>
</tbody>
</table>

*Source: Abram Bergson, *The Economics of Soviet Planning*, p.76.

The incentive scheme used to encourage worker fulfillment

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1Bergson has noted that this latter proviso was not always imperative. The reason for this is that the sovnarkhozy were evaluated primarily by their degree of fulfillment of their gross output targets. (Abram Bergson, *The Economics of Soviet Planning*, p.78.)
of plan indices was considerably different than that used to reward managerial personnel as the latter were much more influential in the attainment of key targets. All workers within an industry are classified into one of eight categories, depending on the qualification and skills required, and an appropriate pay rate for each grade is established by the State Committee on Labour and Wages. Among these various categories, the method of labour remuneration is differentiated between straight time and piecework wages. For piece rate workers, daily piece norms are established and the piece rate is determined by dividing the daily pay accorded to the appropriate groups by the piece norms. Thus for overfulfilling his norm the worker is remunerated usually on a straight piece rate basis. These piece norms were regularly revised to offset and encourage increased productivity. Incentives to encourage straight time workers in fulfilling planned targets were primarily provided by bonuses paid from profit-sharing arrangements.

The source of the major proportion of incentive payments up to 1966 was the enterprise fund. Deductions into the fund were made from profits and the rates for these deductions varied

---

Progressive piece rates for over-norm fulfillment in priority sectors were used widely at one time, but have been severely reduced since 1966. (Alec Nove, The Soviet Economy, p.133.)

In enterprises that incurred planned losses, incentives schemes were based on the degree of overfulfillment of planned cost reductions.

Before 1956 the enterprise fund was called the directors fund. Other minor sources of incentive payments were: the consumer goods fund (for improvement of quality and for production from waste); the socialist competition fund; bonuses for the introduction of new techniques; and bonuses for export deliveries.
between planned and unplanned profits as well as between different branches of industry. For example, the allocation of profits to the enterprise fund was 6 percent of planned profits and 60 percent of overplan profits for the cement industry; for machine building and metal working the comparable figures were 4 percent and 50 percent; in all cases total deductions to the enterprise fund were not to exceed 5.5 percent of the wages fund.¹ The rules applying to the utilization of the enterprise fund were the following: an amount greater or equal to 40 percent of the fund had to be spent on communal housing construction and/or repairs on communal houses; an amount less than or equal to 40 percent of the fund on bonuses, and/or fringe benefits, (e.g., vacations, and personal loans to workers); an amount equal to or greater than 20 percent of the incentive fund had to be spent on new technology, machinery modernization and the improvement of production techniques.²

The disregard for many centrally planned indices that arose because the managerial incentive system was based on the key index of gross output lead to a general revision of the system in 1959. Henceforth the central criterion for premium payments was to be based on the degree of fulfillment of the cost reduction target. In addition the amount of bonus payments were to be affected by the degree of fulfillment of gross output, assortment and labour productivity indices. The new system severely reduced the bonuses received by managerial personnel,

¹D.A. Allakhuerdyan, Soviet Financial System, p.146.
²Zaleski, Planning Reforms, p.148.
which undoubtedly had consequent effects on their morale.¹ The reforms generally had little effect on the incentive system at the worker level. One modification to the worker bonus scheme was made at this time: all piece rate jobs were reviewed and those that did not exhibit obvious benefits by being on a piece rate scheme were switched to straight time. This had the effect of reducing the number of piece workers in the industrial labour force from 73 percent to 61 percent.²

The new incentive system described above only altered the character of but did not solve the problem of the gross inefficiencies that arose out of the manipulating of the enterprises' economic resources to maximize managerial rewards. The problem of creating proper incentives which would maximize the utilization of economic resources and direct them toward appropriate objectives formed the basis of the now famous Liberman proposals. These proposals suggested a radical reformation in the whole system of industrial administration and were a significant stimulus to the wide ranging discussions on industrial administration that culminated in the major economic reforms of 1965.

The basic thrust of the reform aimed at reducing deficiencies at the micro level of administration. The pre-existing system of enterprise control had been inadequate in the efficient utilization of capital, in fostering rapid increases in

¹The share of bonus payments to the basic salaries of engineers and technician fell from 26.4 percent in 1959 to 19 percent in 1960, 13.2 percent in 1961 and 11.6 percent in 1962. (Zaleski, Planning Reforms, p.67.)
²Zaleski, Planning Reforms, p.58.
labour productivity and in promoting innovations at the enterprise level, as well as in encouraging the introduction of newer technology recommended by the central authorities. The 1965 reforms abolished the pre-existing incentive system and reduced the number of central indices assigned to the enterprise to eight targets by introducing the profit concept as the pivotal point of administrative control and evaluation. The eight central indices assigned to the enterprise are shown in the following table.

**TABLE VIII**

CENTRALLY TARGETED ENTERPRISE INDICES, INTRODUCED POST-1965*

1) Sales.
2) Assortment 'mix', i.e., physical output targets of principal products, including production for export and output quality.
3) Profit (gross) and profitability.
4) Wage fund.
5) Contributions to the central budget.
6) Capital investments from central funds, (specifying amount of construction, target dates for initial operations of new capacities).
7) Introduction of new technology and assimilation of new products.
8) Material supplies.


The sales target (or output sold) replaced the gross

---

1 The introduction of profitability as one of the guiding forces in the execution of the economic plans necessitated a complete revision of industrial wholesale prices in order to ensure that the normal operation of most enterprises would provide an adequate profit. Consequently, as a price reform was a necessary prerequisite to introducing the new micro controls, the intention to revise prices was also announced at the same time as the reform proposals. The price reform began immediately after the decision to adopt the new guidance system was taken and the first enterprises were put under the new controls in late 1966 and early 1967.
value of output index as the principal quantitative target of plan fulfillment. Corresponding changes were made in the new incentive system; bonuses for both managerial personnel and workers were dependent on the increases in sales and profitability shown by the enterprise.

The profit based bonus scheme allowed for the elimination of most targets previously assigned that related to enterprise efficiency, with the exception of the total wage fund limits, which remained to ensure the overall balance of income and expenditure of the population. The physical specification of output mix remained to discourage concentration of production facilities on high profit items, which would have otherwise arisen in the attempt to maximize profit.

In addition to the above changes, the major alterations in the micro guidance system occurred with the introduction of a capital charge and the substitution of long-term repayable credits to finance the bulk of new investment. The capital charge was based on the average value of fixed and 'own' working capital of the enterprise for the planned year. The capital levy varied considerably between branches of industry but averaged 6 percent for industry as a whole. The objective of the capital charge was to induce efficiency in the utilization of capital, particularly fixed capital. Shifting the source of financing investments from budgetary grants to long-term credits was meant to discourage the abundant demand for investment resources that had occurred at the enterprise level when investment

funds had been provided by non-repayable grants. Under the new system, investment credits were to be repaid out of enterprise profits and the interest attached to these credits was deducted from gross profits before any payments were made to any of the incentive funds. New investments financed by long-term credits or by the internal resources of the firm were exempted from the capital charge for a period of time. In the former case capital charges were initiated after the repayment of the credits associated with the investment had been completed, while the latter group of investments were not to be included in the capital levy base for a period of two years after their completion.\textsuperscript{1} Temporary exemptions from capital charges were given to internally financed investments so that progressive enterprises could obtain the full profit benefits accruing from their innovations for several years. Thus the temporary exemption encouraged self-financed investments over those financed by long-term credits, as the latter type of investments carried interest charges and therefore reduced the profit available for the incentive funds. The following figure shows the schematic distribution of enterprise profits.

The following division of profits refers only to planned profits. For the distribution of profits that exceed the planned level of profit the following order of priorities exist: capital charge payments and bank interest exceeding the planned; payments to the material-incentive, social-cultural-housing, and decentralized investment funds; payments for socialist competition bonuses; repayment of working capital credits; repayment of

\textsuperscript{1}Feiwel, \textit{Soviet Quest}, p.294.
long-term credits; allocations for increasing the output of consumer goods; allocations for introducing new product lines; payments for the improvement of product quality; other charges; remainder to budget.

FIGURE I

SCHEMATIC DISTRIBUTION OF ENTERPRISE PROFITS*

<table>
<thead>
<tr>
<th>Gross Profit</th>
<th>---</th>
<th>---</th>
<th>---</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit Tax</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Capital Charge</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Interest on Credits</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

Profit Disbursements**

- Material Incentive Fund
- Repayment of Long-Term Credit
- Reserve for Financial Aid to Enterprises
- Social, Cultural and Housing Fund
- Financing Centralized Investments
- Payment of other Planned Expenses
- Decentralized Investment Fund
- Increases of Working Capital
- Free Remainder of Profit (transferred to budget)

*Source: Feiwel, Soviet Quest, p.293.

**N.B., order of priority is left to right.

To encourage the fulfillment (overfulfillment) of the new target indices assigned to the firm a new incentive system was created to provide the necessary material reinforcement. The pre-reform incentive scheme was abolished and replaced by three funds: the material incentive fund; the social, cultural and housing fund; and the development fund (decentralized investment fund).
The material incentive fund is the primary source of bonuses for both managerial and production personnel as well as workers. Payments into this fund are derived from three sources: a percentage of the total wage bill (generally for worker bonuses); a given percentage of the wage fund for increases in profits (or sales where it is the chief index); and a given percentage of the wage fund for increases in profitability (net profit as a percentage of the annual average stock of capital employed). The actual percentage rates of the 'norms' that are used vary between groups of enterprises and/or individual enterprises because under the existing price system enterprises have widely differing profitabilities. Individually calculated norms allow the planners to give greater emphasis to, for example, sales rather than profitability.¹

The fund for social, cultural measures and housing construction is financed from the same sources as the material incentive fund but different norms are used in calculating the deductions from profits. This fund is essentially a bonus in kind for the workers and is expended on such things as kindergartens and sports facilities, as well as for the building and repairing of houses.

¹An example cited by Zaleski will elucidate the method used: "for each percentage point of increase in profits, profits amounting to 0.5 percent of the planned wage fund may be transferred to the incentive fund; for each percentage point of increase in profitability, profits amounting to 0.25 percent may be transferred. If planned and actual profits increase by 8 percent and profitability by 20 percent, (0.5 x 8) + (0.25 x 20), or 9 percent of the planned wage fund for production personnel is to be deducted from profits and placed in the fund for material incentives". (Zaleski, Planning Reforms, p.151).
The development fund of the firm is used to finance investments and the introduction of new techniques. Resources for the development fund originate from the following sources: a set of norms applied to planned increases in profits and profitability (these norms are applied against the planned value of basic capital, i.e., enterprise fixed capital and its 'own' working capital); a portion of the firm's amortization allowance; and revenue from the sale of fixed assets.

In the case of the three above-mentioned funds, overfulfillment and underfulfillment of the plan targets for sales, profits and profitability are penalized by a reduction in the norms used to calculate deductions in the order of approximately 30 percent. A minimum floor of 40 percent of the planned allocations to these funds is provided to mitigate the effect of gross errors in achievement. The profit figure against which all of the above sets of norms use as a foundation for calculation is net profit (i.e., gross profit minus capital, rent and interest charges). For all of the above funds a precondition for profit deductions to the incentive funds is the achievement of the firm's assortment mix targets. For enterprises that are to operate at a planned loss, the deductions to various funds are based on the decrease in costs expressed as a percentage of the firm's capital.

1 Nove, *The Soviet Economy*, p.36. Another source notes that the amount of reduction of the norms for underfulfillment of profits or sales is fixed by the ministry in charge, but the reduction cannot be less than 3 percent for each percentage point of underfulfillment. (Zaleski, *Planning Reforms*, p.151).

Controls

In the Soviet Union all economic units can be classified as either budget supported institutions or agencies and khozraschet organizations or enterprises. The control exerted over budget financed institutions was described in the section of the paper dealing with the implementation of the budget.\(^1\) The khozraschet system is the form of financial organization that is applied to all industrial enterprises, as well as those organizations that are involved in the intermediate and final distribution of goods in the economy. All khozraschet organizations have the following characteristics: they are legal entities and can therefore enter contractual obligations and incur material responsibilities; each organization is assigned an economic plan to fulfill; the operations of these organizations are subject to 'control by the ruble' to ensure the fulfillment of their assigned plans. The following section deals specifically with the microeconomic controls that are utilized in controlling the operations of industrial enterprises but the methods of control are generally applicable to all khozraschet institutions. Control over the economic operations of the various state enterprises is maintained by a combination of physical and monetary controls. The fulfillment of both physical and financial indices or targets are reported by the firm in the monthly, quarterly and yearly reports it must submit to the administrative level to which its subordinate to (glavk or ministry). The auditing of enterprise records take place on a

\(^1\)See pp.26-27.
yearly basis to ensure the accuracy of the above reports. The above-mentioned control procedures are only effective during a prolonged time span and consequently are ineffective for the continual control of enterprise activities. Constant observation of enterprise activities is provided by the constant scrutiny of the financial transactions of all enterprises through the state bank.

To provide for 'control by the ruble' all goods and services received by any economic unit in the country must be paid for. Payment for goods and services must take place in the prescribed form as the granting of commercial credit is banned and the 'cash' balances maintained by the enterprises are rigidly controlled. Cash payments made by enterprises are restricted to the payment of wages, and minor services (which may be paid for out of petty cash). For the vast majority of the goods and services received by an enterprise, payments must be made through book account transfers of bank deposits via the state bank.

The most common method of payment used is where payment is initiated by the payee by means of the 'acceptance method'. Under this method the supplier drafts an invoice-payment demand which is a non-negotiable, non-assignable draft on the purchaser.

Campbell notes that in addition to the above controls, the enterprise books are available to the auditing staffs of the Ministry of Finance, the Central Statistical Administration and the Committee of State Security. Internal observations of the firm's activities are also provided by the chief bookkeeper, who is primarily responsible to the administrative agencies above the firm, and by representatives of the Communist Party who operate within the enterprise. (Robert Campbell, Soviet Economic Power, p.68).
The payee delivers the draft to his branch of the state bank after the goods covered in the invoice have been shipped. If the method of payment stipulated in the inter-firm contract is that of subsequent acceptance, the draft is forwarded to the payer's branch bank for acceptance. The payer must acknowledge acceptance within two days for intra-city deliveries, three days for most inter-city deliveries, and within seven days for deliveries to remote areas of the country. After acceptance is given, the payer's account is debited and the payee's account is credited. In the majority of cases acceptance is of the subsequent sort where payment demands are considered accepted unless advised otherwise within the prescribed time limits. Under the subsequent acceptance method and in cases where acceptance rights have been waived the payee's account is credited and the payer's account is debited on the presentation of the draft by the payee to his branch bank. Gallick gives the following distribution of the various types of acceptance methods used.

**TABLE IX**

**ACCEPTANCE METHODS EMPLOYED***

<table>
<thead>
<tr>
<th>Type of Acceptance</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1958</td>
</tr>
<tr>
<td>Prior acceptance</td>
<td>62.8</td>
</tr>
<tr>
<td>Subsequent acceptance</td>
<td>31.5</td>
</tr>
<tr>
<td>Acceptance waived</td>
<td>5.7</td>
</tr>
</tbody>
</table>


1Hodgman, "Soviet Monetary Controls through the Banking System", p.373.
The acceptance method is used only in payments for goods and services and accounts for 80 percent of all such payments.¹ The increasing use of the subsequent acceptance procedure that is evident in the above distribution is attributable to the desire of the financial authorities to hasten clearing procedures and thus reduce the working capital balances needed by the enterprises.

A variation of the acceptance methods noted above, which has been increasingly adopted to simplify clearing operations, is the opening of mutual offset clearing accounts. Under this scheme, groups of enterprises which have many mutually compensating transactions with one another are given special accounts which are kept separated from their basic account. The account is used for transactions with firms participating in the mutual offset group. Subsequent acceptance methods are used and each account is netted and audited at intervals that are adopted to the particular enterprise production schedule. The net balance of the account is then transferred to the enterprises' regular account.

Other non-cash methods of payment used include payment authorizations, letters of credits, settlement cheques and collection authorizations. Payment authorizations are general purpose payment documents in which the payer directs his bank to transfer the stipulated funds to the account of the payee.²

²Gallick notes that in a 1961 survey the above method accounted for 20.7 percent of the volume of payments for goods and services and 97.8 percent of all other non-cash transactions. (U.S. Bureau of the Census, The Soviet Financial System, p.273).
Letters of credit are similar to those used by the Western-bloc and provide guaranteed payment to the payee under the conditions stipulated in the document. Settlement cheques are used only for payment of goods and services and may guarantee payment in full or to a stipulated amount for certified or limited settlement cheques respectively. Collection authorizations are used to expropriate funds from specified accounts and are granted on the basis of court orders, arbitration board decrees, and various other types of executive documents. In addition, expropriative powers are given to the ministry (sovnarkhoz) for the redistribution of working capital or profits between enterprises. The state bank may also remove funds from enterprise accounts for payments on bank loans.

It should be noted that in all of the methods of payment described above, the payment documents are non-negotiable and non-transferrable. In the case of insufficient funds in the payer's account, the payment document is assigned to a special overdue file. The bank undertakes collection services for all of the above-mentioned payment methods with the exception of ordinary cheque payments. Bills that accumulate in the overdue file are paid when funds become available but payment of such bills is on a priority system, regardless of the due date of the bill. The priority of payments from the overdue file are as follows: 1) wages and equivalent payments to worker and employees, state social insurance payments; 2) payments to the budget; 3) payments for goods and services, (including payments to balance mutual offset clearing balances); 4) deposits of profits and amortization deductions in the accounts for financing capital
investments and capital repairs; 5) payments on bank loans and other bank claims; 6) all other payments.¹

By limiting all financial transactions of the firms to the above methods of payment the state bank effectively limits the amount of 'cash' at the disposal of the enterprise and can thereby continually scrutinize the activity of enterprises as the above-mentioned settlements must be made via the state bank. In this way the state bank can oversee all payments and disbursements to and from the enterprise accounts to assure that they are in accordance with planned flows and that payments are made at the prices stipulated by the state.

The wide use of credit in financing the operations of enterprises provides an additional means of surveillance over enterprise activities. It is customary practice in the Soviet Union that the working capital granted to the firm approaches a practical minimum with regard to the transaction balances required to finance its activities. By this means the idle balances held by the firm are minimized, thus ensuring the proper utilization of funds that are at the disposal of the enterprise. Short-term credits provide the difference between the maximum and minimum transaction balances required.² Credits are granted to the enterprise in accordance with planned needs derived through analysis of the flows of incomes and expenditures


²The authorities' desire for minimal transaction balances are balanced against the costs of administrating the firm's credit requirements. For details on the distribution of these credits and interest rates applicable, see p.29.
with time, and are therefore provided for in the credit plan of the enterprise. Since all of the credits are granted for specific purposes and definite periods of time, the bank has an additional basis of monitoring the activities of the enterprise as repayment of the credits can only come about through income received by fulfilling its plan.

In the case of overdue credits the bank imposes credit sanctions which increase the interest rate on the overdue loan from 1-2 percent to 3-5 percent.\(^1\) If this proves ineffective the bank may utilize any one of the following alternatives: it may expropriate any available funds in the account of the enterprise up to the limit of the unpaid loan and interest; it may specify that only guaranteed methods of payment (certified cheques, letters of credit) may be used for out-of-city payments; it may prevent an enterprise from utilizing any unpaid shipments of goods; it may refuse to grant any further credit unless the loan is guaranteed by the enterprise's superiors; and as a last resort, the bank may declare the firm insolvent, thus provoking a full scale inquiry of enterprise operations.

Gosbank is also the fiscal agent for the government; in fulfilling this role it is responsible for the collection of budgetary revenues, which allows for further scrutiny of enterprise operations in the fulfillment of their economic plans. Through the collection of turnover taxes, rental charges, profit taxes and capital charges, which are all stipulated in the enterprise plans and collected at various times, ranging from daily

to quarterly collection, any deviations from ex ante expectations will be reflected in ex post balances of the various accounts specified for the above collections. In addition Gosbank has a correspondent relationship with the investment bank (Stroibank) and is responsible for the collection of that portion of the depreciation allowances and profits that are allocated to the central investment fund.¹

From the preceding description it is seen that Gosbank utilizes a variety of methods in subjecting all khozraschet organizations to control by the ruble in their fulfillment of their economic plans. By using a system of monetary accounting, the variety of heterogeneous inputs and outputs of a firm can be converted into their monetary equivalents and the planned flows of these goods can be evaluated through monitoring the financial transactions of the enterprise. As the financial balances of enterprises are rigidly controlled, planned deductions from profits, amortization allowances, turnover taxes, repayment of credits and all other financial obligations of the firm can be met only through the proper execution of their economic plan, which will ensure the sufficient means with which to meet the above obligations.

Proper execution of enterprise plans is also reinforced through the obligation of the enterprise to enter contractual

¹The appropriate sums are collected and deposited in specific accounts every ten days. (U.S. Bureau of the Census, The Soviet Financial System, p.27.) It should be noted here that Stroibank provides all banking functions for the construction organizations. In addition, it administers enterprise development funds and disbursements from these funds are made only on the basis of the approved investment plans.
agreements with its suppliers and with the purchasers of the planned output of the enterprise. Both suppliers and purchasers are stipulated in the enterprise plan but the formal signing of contracts is necessary for giving detail to the general assignments specified in the plan. Thus the contractual obligations stipulate such things as packaging requirements, delivery dates, detailed specifications and quality of goods contracted for, method of payment, and the prices of the contracted goods. In the case of contracts for custom orders or experimental models that are not specified in state price lists the firm is allowed to set its own price in agreement with the purchaser, the price being based on the average cost of production of the order plus a 5 percent markup.¹

Contractual disputes are outside the jurisdiction of civil courts when both parties are 'socialist organizations', settlements of such disputes being carried out either by superior administrative organs, or by state arbitration tribunals. The ministry of the respondent organization settles disputes where the sum does not exceed 1,000 rubles; all disputes in excess of this amount are referred to arbitration tribunals.²

Arbitration tribunals deal with all pre-contract disputes and disputes arising out of breach of contract. In

¹Martin Spechler, "Decentralizing the Soviet Economy: Legal Regulation of Price and Quality", Soviet Studies, Vol.XXII (October, 1970), p.231. The above article notes that after 1965 the prices of such goods were allowed a markup of 10-20 percent over average costs.

pre-contractual disputes involving the refusal to contract or the terms of the contract, the tribunal will decide the disputed points and order the parties to conclude the contract on whatever terms it has decided. For breach of contract the arbitration board may order specific performance or money damages. Generally specific performance can be ordered only where the execution of such an order will not interfere with the normal operations of the enterprise. In such cases where specific performance is impossible, due to such factors as a lack of necessary supplies, the arbitration board will grant money damages if the contract is still valid under the plan in force at the time of the dispute.¹ In the imposition of fines and in the granting of money damages the tribunal has the power to enforce such awards by granting execution warrants, which order Gosbank to expropriate the stipulated sum from the enterprise's account.

By entering into contractual obligations the various enterprises 'pledge' to fulfill these assigned tasks. As all contracts are drawn up to reflect the planned obligations of the firm in fulfilling its output orders the default on any contract reflects deviations from the plan, which can then be subjected to investigation by the appropriate authorities.

¹Changes in enterprise plans that occur during the planned year, that make it impossible to fulfill previous contracts under the terms of the new plan, are recognized as a valid defence for breach of contract. These types of disputes occur frequently due to changes in the plan where the authorities fail to consider the ramifications involved in changing enterprise assignments.
The following chapter on the agricultural sector of the economy will follow a similar investigative format as that used in the chapter on industry. Three areas of investigation will be pursued: macro production-supply planning and micro plans and controls; agricultural prices; and the structure and level of incentives at the farm level. The integration of these above-mentioned variables in forming a coherent system of allocation mechanics varies significantly from their relative importance in the industrial guidance mechanism; thus the role of prices and incentives in the allocative mechanics applied to agriculture will be intensively examined in the following chapter. The differences in the two microeconomic organizational forms in agriculture, namely collective farms and state farms, will be distinguished, and the changes that have taken place in their respective allocation mechanics, since the death of Stalin to the present time, will be explored.

Production-Supply Planning and Micro Controls in Agriculture

Production-supply planning

Soviet agriculture is basically organized into state farms and collective farms, with both types of micro orga-
tional forms subject to comprehensive systems of state control. The system of planning to be described below refers to the period after 1955. The methods used in plan formulation changed in 1954 and 1955 for state and collective farms respectively but these changes were generally restricted to the formulation of micro plans for the farms, although they had an effect at the macro level by reducing the number of centrally determined indices.

The methods utilized in formulating the agricultural portion of the national economic plan follow a parallel pattern to the methods described for industrial production-supply planning. The core of the agricultural plan is the directives formulated by the Party leaders. Basing their decisions on aggregated past and projected year-end achievements, industrial demand for agricultural raw materials, the nutritional consumption standards desired for the population and the investments necessary to achieve these standards, directives are sent to Gosplan. These directives stipulate the desired increase in gross production of major crops, gross state purchase targets for these crops, cost reduction targets for principal state farm crops and the level of centralized investments allocated to agriculture. Gosplan then constructs control figures for state purchases of farm and livestock products for the Soviet Union.

1Private farming still exists where it was not feasible to collectivize private holdings due to their geographical location or other extenuating circumstances. Since private farms account for such a small fraction of the total agricultural output, and since most of their output is directly consumed, they will not be discussed in this study.
as a whole, and for each republic. In addition, the total wage fund and number of workers, and the volume of capital investments are stipulated for the state farm sector. These figures in turn are passed down the state and collective farms' administrative hierarchies where they are progressively disaggregated until each collective and state farm is assigned a sales target for major crops and livestock deliveries to the state. Individual state farms also receive targets for their wage fund and number of workers, cost reduction targets for principal farm products, and levels of capital investment. From the control figures assigned, state and collective farms formulate their annual production-financial plans, which are composed of the following sections:¹

1) targets sent to the collective and state farms by the state;
2) land utilization plan (including the availability and utilization of arable and grazing lands);
3) crop farming program (including sown areas, crop areas, yields and gross outputs of main crops, productivity, requirements in seed, fertilizers, pesticides, land improvement measures and direct outlays on production);
4) animal farming program (including livestock and poultry stocks and their reproduction rates, productivity of the animals, fodder requirements, zootechnical and veterinary measures, and direct outlays on production);
5) construction program and programs for ancillary enterprises

(including volume of production and quality indices);
6) mechanization of principal work processes, utilization and repairs to equipment (including MTS services required for collectives prior to 1958);
7) labour plan (including labour forces and its utilization, and the wage fund);
8) estimated production costs;
9) measures for raising cultural and living standards and for training specialists;
10) statement on sources and application of funds.

Once the draft production-financial plans have been approved by the farms' immediate superiors, the above indices are aggregated along with the requisitions for the necessary material inputs and a consolidated agricultural plan is calculated individually for both state and collective farms and for both farm categories as whole. The draft agricultural plan is then included as part of the general plan for the development of the national economy and this general plan is then forwarded to the Council of Ministers, U.S.S.R., and the legislature for their approval. After the plan has been approved it is disaggregated in its passage down through the administrative hierarchy until each farm receives its final assignments. On the basis of these assignments, detailed operational production and financial plans are constructed and approved, contractual obligations are established vis-a-vis state purchases of outputs, and detailed orders for material inputs are sent to the appropriate supply agencies.

It was previously noted that the above planning
techniques referred to those used after 1955. During the early 1950's numerous other control figures were established to control the formulation of the micro plans. In the case of collective farms, their production plans were constructed by their immediate superiors, the raion Soviets and the district motor tractor station (MTS), and were rubber stamped by the general meetings of the collective farms. In 1954 the number of centrally set indices for state farms were reduced to those mentioned above. In the following year all centrally set indices for collective farms, with the exception of state purchase targets for major crops and livestock, were abolished and ostensible control over plan formulation was granted to the farm membership.

The numerous reforms in the agricultural administrative hierarchy that were undertaken between 1957 and 1965 altered the flow of centrally determined indices to the farms, as well as agencies responsible for the implementation of the plans, but the reforms had little effect on the actual activities involved in formulating the agricultural plan. Throughout this period the government continued to encourage the amalgamation of collective farms into larger units and the conversion of collective farms into state farms, although the amalgamations and conversions took place at a somewhat slower rate than had previously been the case. In a single year, between the beginning and end of 1950, the number of collective farms was reduced from approximately 252,000 units to 121,000 units.\(^1\) Between

\(^1\)Lazar Volin, "Agricultural Policy of the Soviet Union", in The Soviet Economy, ed. by Morris Bornstein and Daniel Fusfeld, p.177.
1953 and 1963 the number of collective farms had decreased from 91,200 to less than 40,000, while the number of state farms increased from 5,000 to 9,176 over the same period;¹ by 1964 the respective numbers were 37,618 and 10,075.² The rationale behind the amalgamations was to consolidate weaker collectives into larger operating units in the hope of improving efficiency, while the transformation of collectives into state farms was undertaken on those collectives which were in need of large-scale state investments for such things as irrigation or electrification. Although the amalgamation of collective farm units greatly simplified the planning process and increased the ease of central supervision over farm operations, the consequent problems of effective internal management more than offset these benefits.³ After the removal of Khrushchev the new leadership ordered a stop to the amalgamation of collective farms, and the conversion of collective farms into state farms was severely decreased.

Along with eliminating and reducing the amalgamations and conversions of collective farms, one of the first reforms

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³The average sown area for collective and state farms at the end of 1950 was 2,400 and 6,400 acres respectively. By the end of 1963 the comparable figures were 7,156 acres and 24,000 acres. (Lazar Volin, "Khrushchev and Soviet Agriculture", in Soviet and East European Agriculture, ed. by Jerry Karcz, p.16.) Spulber gives the average sown area of state farms in 1965 as 60,000 acres. (The Soviet Economy, p.79.)
introduced by the new leadership was to provide stable targets for grain procurements for the 1966-1970 five-year plan period. The effect of this reform was that the procurement targets received by the individual farms in 1965 were to be stable for the following four years, thus facilitating meaningful long-term planning of crop rotation systems and other long-term soil preservation measures.

The last modification to the planning system was undertaken in late 1967 when it was decided to convert state farms on to a similar profitability incentive system that had been initiated in industry after the 1965 reforms. By the end of 1969 some 3,800 state farms (roughly one-third of the total) had been transferred to the new system and current intentions are to convert all state farms to the new system.\(^1\) The effect of these financial and incentive related reforms was to reduce the number of centrally targeted indices assigned to the converted farms. By relating incentives to the profitability of farm operations, the central authorities were able to eliminate the targeting of cost reductions and the maximum number of workers that could be employed by relying on material self-interest to respectively maximize and minimize the now redundant target variables.

Micro controls

The degree of control exerted over collective and state farm activities by the central authorities has significantly decreased since the death of Stalin. Up to 1953 the responsi-\(^1\)Gertrude Schroeder, "Soviet Economic Reform at an Impasse", Problems of Communism, Vol.XX (July-August, 1970), p.39.
bility for guidance and control over collective farm activities was vested in the following institutions: the raion government and Party organs and the agronomic departments attached to these agencies; the motor tractor stations; the district procurators; and the village Soviets. The raion agencies were responsible for drafting the production plans of the individual collective farms, which contained some 200-250 targeted indices;\(^1\) reviewing the income and expenditure balances of their subordinate farms; approving contracts signed between the farms and the MTS; and annulling any decisions undertaken by the general meetings of the collective farms which it considered unlawful. The agronomic departments attached to the raions determined production quotas, sowing patterns, seasonal use of lands, and the implementation of agricultural innovations and mechanization. These same departments were also responsible for giving daily 'assistance' to the collective farms in all of their productive and administrative matters. The MTS was to 'assist' the kolkhoz in the following matters; the preparation of its operational production and financial plans, the distribution and remuneration of the economic activities undertaken on the farm, and to help the farm determine the most advantageous utilization of its lands. The district procurator's primary function was to ensure that the production and collection of farm outputs was in accordance with specified quantities. In addition, these agencies reported on the compliance of collective farms and individual kolkhozniki with central government directives regarding

\(^1\)Erich Strauss, *Soviet Agriculture in Perspective*, p.37.
collective farm practices. Finally, the village Soviets were legally empowered to participate in the operative guidance of the kolkhozy. Constant control over plan fulfillment and the organization of activities within the kolkhozy was maintained by these bodies through assigning deputies or aktivs to each working unit within the farm.

The comprehensive and often overlapping controls described above existed until 1953. At that time the agricultural departments of the raion executive committees were abolished and their functions were largely transferred to the MTS. In 1955 a central government decree abolished the numerous targeted indices that were previously assigned to the collective farms. Henceforth the central agencies would only assign procurement targets to the individual farms. The farms were now responsible for constructing their own production and financial plans within the minimum requirements prescribed by their procurement targets. The increase in farm autonomy was nominal; the farms constructed their plans under the tutelage of the MTS and they were subject to approval and revision by the raion executive committees. When the MTS was dissolved in 1958 their machinery was acquired by the individual kolkhozy. Although the farms obtained control over the type and timing of soil improvement measures, harvesting, ploughing, and other mechanized activities, general control and supervision over farm operations was maintained by the raion offices.

In 1962 the rural raion offices were eliminated and a unified system of state control over agriculture was created. Nearly 1,000 territorial production administrations were created
and charged with the functions of executing the decisions of the party and government regarding collective and state farms, and controlling the production and procurements of agricultural products.\(^1\) Thus the previous functions undertaken by the raion offices and the district procurators were now undertaken by the territorial production administrations. In 1965, under the massive reforms carried out by the new leaders, the territorial production administrations were dissolved and the supervisory agencies for collective farm activities reverted back to the pre-1957 structure, minus the defunct MTS.

The structure of the supervisory and control agencies has remained constant from 1965 to the present time. The collective farms are assigned quota deliveries by the central government through their raion offices and construct their production plans under the guidance of their district agronomic departments and subject to the approval of their respective raion executive committees. Once these plans have been approved, the collective farms contract to deliver their quota assignments to the state procurement agencies.

The controls over the operation of state farms were very similar to those that existed in the industrial sector of the economy. Up until 1962 control over state farm operations was maintained by the operative management agencies of the various agricultural glavki called trusts.\(^2\) These agencies were

\(^1\)Howard Swearer, "Agricultural Administration under Khrushchev", in Soviet Agriculture and Peasant Affairs, ed. by R.D. Laird, p.29.

\(^2\)State farms located in the same area and engaged in the same type of production were grouped under a single administrative
responsible for maintaining continuous control over the fulfillment of production plans and the utilization of funds and credits by the individual farms. In addition the trusts were responsible for the overall organization of work processes within the state farms and for reviewing, modifying, and approving the production, financial, and capital expenditure plans of their subordinate farms. Although the state farms are nominally responsible for drafting their own production-financial plans, within the context of the centrally determined indices that were listed above, they are subject to major modification before approval is given. When these plans are returned to the trusts for approval the various input coefficients contained in these plans, for example, the consumption of fodder per unit of livestock, labour inputs per hectare of the main agricultural crops, and fuel and lubricant inputs per unit of output, are compared with centrally determined input norms and are adjusted accordingly, unless the proposed coefficient can be adequately justified. Aside from these direct controls over farm operations, the production and financial plans are subject to supplementary controls through contractual obligations between the farms and the procurement agencies for the sales of the targeted outputs, and through the financial controls over planned operations executed through the state banking system.

In 1962 the trusts were abolished in favour of the unified system of state control over agricultural operations that was executed through the territorial production administrations. body, called a trust, for coordination and management purposes.
This reform had little effect on the system of controls described above, other than they were now carried out by the newly formed administrative bodies. In 1965 the new leadership dissolved the unified system of state control over agriculture and re-established the pre-1962 control agencies.

The reform that was initiated in 1967, which called for the gradual conversion of state farms to a system of financial self-reliance, ostensibly reduced the degree of external control over the internal operations of the state farms. Under the new arrangement the trusts may only modify the sales, wage fund, and profit indices, and set limits for working capital and capital construction. The increased discretion allowed to farm managers under this arrangement is dubious; through modifying the above planned indices the trusts can indirectly influence the variables from which these indices are derived.

Agricultural Prices

Two objectives were pursued in the setting of agricultural prices, namely to establish favourable terms of trade for the industrial sector of the economy, vis-a-vis the agricultural sector, and to simultaneously set the prices paid for agricultural products at a level sufficient to provide adequate incentives to encourage production. Obviously both objectives of the pricing strategy could not be simultaneously satisfied. During the period being considered, it will be shown that the balance between these two conflicting objectives has been progressively shifting in favour of providing adequate price
incentives for agricultural production at the expense of increasing the terms of trade of the agricultural sector, relative to industry.

There were four relevant price structures faced by collective farms from 1950 to 1958: compulsory delivery prices; prices paid by the state for deliveries in excess of the compulsory target; state contract prices; and collective farm market prices. State contract prices were only relevant to those collective farms which specialized in growing technical crops. These farms would contract to sell the whole of their output to the state at contractual prices which were progressive, depending on the output achieved.¹ Throughout most of this period these contractual prices were relatively higher than the compulsory delivery or state purchase prices in order to provide adequate production incentives, as these crops were important as a raw material base for the textile and food processing industries, and the revenues from these crops were often the sole source of income for the collective farms concerned with their production. With regard to the other prices, compulsory delivery prices were set at the lowest level, prices for deliveries made above the compulsory minimums were higher, while collective farm market prices were the highest.

The prices paid for compulsory deliveries of farm outputs, and for state purchases above the compulsory minimum, were differentiated by regions, and were ostensibly based on the

¹Generally a contract price was set for the targeted output expected. For overfulfillment of the output plan the state would pay progressively higher prices.
average cost of production of the commodity within the defined region, plus a small 'profit' markup. Deliveries of commodities above the compulsory minimum included an additional profit markup. Through a combination of zonally differentiating the prices paid for commodities, and by varying the compulsory limits set for deliveries, the state could mitigate, to some degree, the excessive profitability of farms located in areas of rich soils, and/or favourable climatical conditions. High yielding farms could be given a relatively high compulsory delivery target, for which they were paid relatively low prices, thus leaving proportionately less of their total output that could be marketed at the higher above-target prices or the still higher collective farm market prices.\footnote{Deliveries above the compulsory minimum were not in fact voluntary due to the fact that outputs in excess of the compulsory targets could be sold at the higher collective farm market prices. Various inducements, such as giving priority in the allocation of scarce materials and selling certain commodities to the farms at discount prices, were used to induce farms to meet the planned deliveries that were in excess of the compulsory minimum.} The MTS payments in kind were also instrumental in 'leveling' the variations in profitability among collective farms in that the charges for work done were often expressed as a percentage of the gross harvest. Through the manipulation of the above variables the state could, to some degree, control the distribution of profits among the collective farms, as well as directly influence the supply of commodities on the kolkhoz markets, and thus the prices obtained for these commodities.

The above description gives a theoretical and rather
idealized account of the price structure faced by the collective farms up to 1958. From 1950 to 1952 the prices of many goods delivered under the compulsory targets failed to cover the costs of production.¹ Compulsory delivery prices had remained virtually unchanged from their 1940 level, while retail prices had increased 1000 percent over their 1940 level.² Contractual prices paid for technical crops were generally far more favourable throughout this period as the frequent revisions made to these prices kept them more in line with the rising consumer price levels.

After Stalin's death there were a series of price revisions; the largest taking place in 1953, 1954, and 1956. Although these upward revisions of both the compulsory delivery prices and state purchase prices greatly increased the level of remuneration for farm production, they were insufficient to cover production costs in all cases, especially for livestock products, and where they did cover costs the level of profitability varied greatly between different commodities. The following table indicates the rapid increase in prices and the change in the price structure that occurred during this period.

In 1958 major changes were carried out in the government agricultural procurement system. The dual price system of compulsory delivery and state purchase prices was abolished and

¹Labour costs for collective farms are imputed costs, using state farm wage rates. Until the abolition of the labour day system in 1966, the level of remuneration was dependent on the residual income of the collective farm.

TABLE X
INDICES OF SELECTED SOVIET AGRICULTURAL PROCUREMENT PRICES*
(1952=100)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>All agricultural products</td>
<td>154</td>
<td>207</td>
<td>209</td>
<td>251</td>
<td>296</td>
</tr>
<tr>
<td>Grain</td>
<td>236</td>
<td>739</td>
<td>553</td>
<td>634</td>
<td>695</td>
</tr>
<tr>
<td>Technical crops **</td>
<td>115</td>
<td>111</td>
<td>117</td>
<td>147</td>
<td>143</td>
</tr>
<tr>
<td>Sunflowers</td>
<td>528</td>
<td>626</td>
<td>987</td>
<td>928</td>
<td>774</td>
</tr>
<tr>
<td>Fruits</td>
<td>119</td>
<td>135</td>
<td>138</td>
<td>192</td>
<td>179</td>
</tr>
<tr>
<td>Potatoes</td>
<td>316</td>
<td>369</td>
<td>368</td>
<td>814</td>
<td>789</td>
</tr>
<tr>
<td>Cattle</td>
<td>385</td>
<td>579</td>
<td>585</td>
<td>665</td>
<td>1,175</td>
</tr>
<tr>
<td>Milk</td>
<td>202</td>
<td>289</td>
<td>303</td>
<td>334</td>
<td>404</td>
</tr>
<tr>
<td>Eggs</td>
<td>126</td>
<td>135</td>
<td>152</td>
<td>155</td>
<td>297</td>
</tr>
<tr>
<td>Wool</td>
<td>107</td>
<td>146</td>
<td>158</td>
<td>246</td>
<td>352</td>
</tr>
</tbody>
</table>

*Source: Bornstein, "Soviet Price Theory", p.239. The prices quoted are average state procurement prices on agricultural products.

**Includes raw cotton, flax fiber, hemp fiber, sugar-beets and tobacco.

replaced by a unified state purchase price for each commodity. Compulsory deliveries were replaced by quotas, or targeted sales to the state, and the sales of quota and above-quota commodities were paid for at uniform prices. Although the systems of reciprocal sales and sub-retail pricing were also abolished as a means for encouraging above-quota deliveries,¹ the quota assignments were still compulsory, while above-quota deliveries were still planned and were quasi-compulsory in nature. The final general aspect of this reform was the scrapping of the Motor Tractor Stations and their conversion into repair and servicing depots. The MTS equipment was sold to collective farms with the aid of long-term credits extended by the government. With the acquisition of their own agricultural machinery, the previous

¹See n.1, p.73.
system of payments in kind paid to the MTS for their services was also abolished.

Table X indicates the extent of the price revisions undertaken in 1958. The level of the price increase was circumscribed by the constraint that the total price paid by the state for its purchases of agricultural commodities was not to exceed the pre-1958 level, plus the costs of MTS operations and investments. Therefore the overall increase in agricultural purchase prices was to provide additional revenues to the collective farms for the purpose of financing the repayment of the long-term credits, extended for the acquisition of the MTS equipment.\(^1\) Within the overall constraint mentioned above, there was significant improvement in the regional differentiation of prices toward an incentive orientation. Although procurement prices were set higher for high cost regions, the profit margins in low cost regions were to be higher, thereby stimulating regional specialization of production.\(^2\) Provisions were made at this time to adjust state purchase prices to the variations in gross harvests; in exceptionally good harvest years the prices were to be lowered, while in poor years the prices were 'supposed' to be adjusted upwards.

The price reforms undertaken in 1963 and 1965 further increased the general level of agricultural procurement prices,

\(^1\)Collective farm revenues were also increased at this time by permitting the farms to obtain machinery, trucks, spare parts and gasoline at state industrial wholesale prices, rather than retail prices. (Bornstein, "Soviet Price Theory", p.239.)

\(^2\)Farms could only respond to these profit incentives after they had satisfied their quota obligations.
and modified the relative prices in order to make prices correspond more closely to the average costs of production within any given price zone. In the course of the 1965 reform minor alterations were made in the zonal price boundaries, and the supposed flexibility in purchase prices, vis-a-vis the variations in gross harvest levels, was eliminated. In addition, above-quota premium prices were reintroduced for wheat, rye, cotton and sunflowers.¹

Since 1965 there has been no fundamental changes in the system of agricultural prices facing collective farms. Several additional price adjustments have taken place in recent years which have served to modify the relative price structure as well as increase the general level of purchase prices; reflecting the new leadership's desire to continue to improve the terms of trade of the agricultural sector.

The price structure of agricultural products that was applicable to state farms was generally lower than the comparable prices paid to collective farms, but the economic effects of state farm prices differed considerably from those prices paid to collective farms. State farms are essentially enterprises 'in the field', consequently the main function of state farm prices, like enterprise wholesale prices, is to provide a means for accounting and control. State farm workers are paid wages on a piecework scheme, and the utilization of farm lands, until recently, has been rigidly controlled by superior agencies. Therefore the structure of the relative agricultural prices, and

¹Above-quota premium prices were extended to several other commodities during 1970; see page 158.
the level of these prices, had very little allocative or incentive effects on state farm production. The prices paid to state farms were based on collective farm compulsory delivery prices but were set at a marginally lower level, due to the fact that state farms were supposed to represent the ideal model of farm organization.\(^1\) The losses incurred by the majority of the state farms under this pricing arrangement were offset by subsidies from the state budget.

The reforms undertaken in the pricing of state farm outputs between 1950 and 1965 generally paralleled the regionally differentiated price increases that applied to procurements from the collective farm sector, but throughout this period the state farm prices were held consistently below the procurement prices paid to collective farms, for the vast majority of agricultural products. The rapid rise in the sovkhoz price level during this period served to reduce the level of state subsidies paid the sovkhozy, but average costs still exceeded average revenues for seven of these fifteen years.\(^2\)

In April, 1967, some 390 state farms were transferred to a system of 'full economic self-reliance', similar to the type of system instituted in the industrial sector after the 1965 reforms. Under this new system the above farms were to receive long-term credits to finance their capital investments,

\(^{1}\)After 1958 state farm prices were based on the unified state purchase prices and were set, on an average, 15 percent to 20 percent lower than the prices paid to collective farms. (Roger Clarke, "Soviet Agricultural Reforms Since Khrushchev", Soviet Studies, Vol.XX (October, 1968), p.175.)

rather than receive non-repayable budgetary allocations for capital expenditures. In order to provide sufficient revenues to finance the repayment of the long-term credits, the prices paid to the sovkhozy transferred to the new system were realigned to equal the generally higher quota purchase prices paid to collective farms. By the end of 1969 about 3,800 state farms had been transferred to the new system of financial self-reliance,¹ and it is the expressed intention of the government to convert all state farms to the new system during the course of the ninth five-year plan.² Thus the present situation is that a minor proportion of state farms are under the new system of financial self-reliance and are paid prices equal to the quota prices paid to collective farms in their region, while the other state farms, which are still receiving budgetary grants to finance their investments, are paid prices that are generally lower than those paid to the collective farms in their respective regions.

**Incentives at The Farm Level**

In the case of collective farms, the method used to remunerate members for their work was to distribute the residual income of the farm among its members, in accordance with the quality and quantity of their labour contributions. The labour day system, which was used up until 1966, was devised to

calculate what proportion each member made to the total productive efforts of the farm. Using centrally established labour day scales as a guide, each farm was to establish a norm or daily expected achievement for each task undertaken on the farm. These tasks would then be placed into one of nine categories, depending on the effort and skill required, and labour values ranging from one-half to two and one-half labour days would be assigned to each job category.¹

Farm members were assigned to brigades or work teams who were responsible for working a defined section of land or number of livestock. Each day the brigadier (or team supervisor) assigned the necessary tasks to be undertaken among the members reporting for work, and at the end of each day he credits the members with the labour day values of their respective jobs, in accordance with their proportional fulfillment of the job norm. Bonus payments of labour day credits were made at the brigade level and were calculated on the basis of overfulfillment of the yield targets assigned to the brigade, and the relative performance of the brigade with other brigades responsible for similar types of work. Within the brigade the bonus labour day credits were allocated among members in accordance with their proportional contribution to the total labour day credits amassed by the brigade. At the end of the agricultural season, the total number of labour day credits awarded to farm members were totaled, and the value of each labour day unit was calculated by taking the residual income in cash and in kind of the farm and

¹Spulber, The Soviet Economy, p.86.
dividing these amounts by the total labour day credits awarded during the year.

The residual income in kind was the amount of total commodity outputs left after meeting the following deductions: the compulsory targets (or quotas) assigned by the government; the MTS payments in kind;\(^1\) the winter feed requirements for farm livestock; and the seeding requirements for the next year's crops. In addition, the farm could decide to sell a portion of the remaining produce on the kolkhoz markets to increase their monetary revenues. The remaining amounts of commodity outputs were then divided between members, in accordance with their relative proportions of the total labour day units. Out of the gross money income received by the farm for the sale of its outputs, deductions for taxes, insurance, production and administrative expenses, capital fund contributions, and cultural fund deductions were made to derive the residual money income, which was then subject to distribution in accordance with the labour day scheme.\(^2\) Thus the value of a labour day unit remained

\(^1\)When the MTS was dissolved in 1958 these payments were eliminated.

\(^2\)Taxes were levied on gross farm revenues, including income in kind distributed to the workers, valued at state purchase prices, but excluding allowances for fodder. Previous to 1958 the tax rates were variable, depending on the source of income. From 1958 to 1965 a flat rate tax of 12.5 percent was applied. Capital fund contributions were stipulated by the central authorities and up to 1958 averaged around 16 percent of gross cash revenues. After 1958 the deductions approached 30 percent of gross cash revenues in order to finance the repayment of long-term credits extended for the acquisition of the MTS equipment. (Nove, *The Soviet Economy*, p.55.)
uncertain until year-end calculations were made. Considerable variations in labour day values occurred from year to year, as the unit value depended on the favourableness of the climate and on the total number of labour day units awarded, as well as the level of procurements extracted by the government and the prices paid for these procurements.

The incentive system used to remunerate the managerial efforts of collective farm chairman differed appreciably from the method used to remunerate lower-level personnel described above. The base pay of collective farm chairman was composed of two parts: 1) labour day credits, awarded on the basis of the number of hectares under cultivation and on the quantity and kinds of the various livestock holdings of the farm, as well as a percentage supplement to the labour day credits so calculated based on the length of service;\(^1\) 2) a monthly ruble amount that varied according to the money income of the collective farm. Bonus payments were made for overfulfillment of crop yield plans and/or livestock production, providing that the planned assortment of farm outputs had been achieved. The bonus payments were calculated as a percentage of the base pay and were progressive, relative to the percentage increase in plan overfulfillment. Penalty levies were made against the base pay of the collective farm chairman for underfulfillment of the planned output targets. The percentage underfulfillment of the

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\(^1\) A 5 percent supplement to the labour day credits was given for three years of service, up to a maximum supplement of 15 percent for service of five years or more. (Robert Stuart, "Managerial Incentives in Soviet Collective Agriculture during the Khrushchev Era", *Soviet Studies*, Vol.XXII (April, 1971), p.550.)
planned output for each crop was summed and an equivalent percentage of the chairman's labour day credits was deducted from that portion of his base pay, up to a maximum of 25 percent.¹

Minor modifications were made to the labour day scheme from 1950 to 1966 but the basic characteristics of the incentive scheme remained unchanged. In 1956 the central authorities recommended that the collective farms make advance monthly money payments to the workers and charge the advance payments against the final distribution of the residual farm income. To finance the money advances, arrangements were made to advance payment to the farms of up to one-half of the total value of the major crops subject to compulsory deliveries.² By 1958 95.3 percent of all farms had adopted an advance payment scheme.³ In addition to the above change, the rapid increase in state purchase prices after 1953 served to markedly shift the form of labour remuneration from payments in kind to cash, as well as raise the value of labour day units appreciably.

The uncertainty as to the value of labour day credits, and the general inadequacy of the labour remuneration in providing sufficient incentives to produce, lead to the abolition of the labour day scheme in 1966. A decree issued in March 1966 ordered the collective farms to replace the labour day scheme with a system of minimum guaranteed payments in cash and kind

³ Ibid.
for collective farm workers. To assist the farms in meeting the guaranteed wage payments, the government cancelled the outstanding debts owed by the collective farms for purchases of the MTS equipment, and extended five-year loans to the poorer collective farms; by early 1968 some 93 percent of the collective farms had been converted to the new scheme.¹ Under the new system workers were to be paid for work they had done at minimum pay rates, which were to equal those paid on state farms for similar types and amounts of work. The distribution of labour payments between cash and kind was left to the discretion of the individual farms. Income in kind was to be valued at state purchase prices and the total value of payments in cash and kind had to equal the remuneration paid under state farm rates; therefore the money payments distributed monthly were equal to the proportion of total labour remuneration to be made in cash. In order to provide a guarantee of the payments in kind that were owing to the workers at year end, a guaranteed fund of produce, stipulated as a fixed proportion of the gross harvest, was to be set aside for the payments in kind that were outstanding.²

Modifications to farm manager incentives, the financial priorities faced by the collective farm, and the system of bonus payments to workers were also an integral part of the new incentive scheme. Under the new incentive scheme farm managers were to receive a guaranteed monthly salary. Supplemental bonus


²Cash payments were guaranteed in that payments for work done were to be the first charge on the gross cash incomes of the farms.
payments were to be paid on a progressive basis, the amounts depending on the degree of overfulfillment of planned outputs. Payments for the labour services of both managers and workers now have the highest priority on gross revenues, followed by taxes, social and comprehensive insurance payments, capital fund contributions, and deductions to the cultural fund. Worker bonuses were to be linked to the quantity and quality of output produced and were to be paid from the net income remaining after the above-noted deductions had been made.

Throughout their history collective farms have been competing with the private household plots for the labour services of its members.¹ The attractiveness of this alternative source of income for the peasants made it necessary for the government to stipulate annual mandatory minimum labour day requirements for collective farm members. The minimum required labour days were regionally differentiated and by 1954 varied from 100 to 150 labour days.² After 1956, collective farms were granted the authority of stipulating minimum labour day contributions sufficient to carry out the necessary work. The devolution of this authority apparently has not resulted in decreased minimum requirements.³ Although collective farm revenues have greatly increased since 1953, which consequently has permitted

¹The maximum size of private plots is approximately two and one-half acres, but they vary up to this maxima, depending on the quality and quantity of land available. Although peasants may own livestock up to specified numbers, their rights to their private plots are conditional on remaining members of the collective farm.

²Bergson, The Economics of Soviet Planning, p.223.

³See p. 163.
a marked increase in the value of labour day payments, the attractiveness of collective farm work relative to the cultivation of private plots has not shown a corresponding increase because of the modifications made that have affected the labour incentives toward private cultivation.

Prior to 1953 compulsory deliveries for private plots included all major farm products. The delivery levels were a substantial proportion of the potential output of the sown areas, and were paid for at the nominal procurement prices then in affect. Failure to meet the compulsory delivery targets resulted in outright confiscation and/or monetary fines. Aside from the high compulsory deliveries demanded from the private plots, an agricultural tax was levied on the assumed income received from private cultivation and animal husbandry, and was subject to progressive taxes ranging from 12 to 48 percent.\(^1\) In mid 1953 the compulsory delivery targets on private plots were considerably reduced, thereby freeing a larger proportion of their total outputs for collective farm market sales. Several months later the agricultural tax base was shifted to a straight land tax and tax rates were lessened, resulting in an average reduction in the tax burden on proceeds from private cultivation of some 58 percent.\(^2\) The last positive inducement undertaken by the Khrushchev regime toward increasing the attractiveness of private cultivation occurred with the elimination of delivery quotas, that took effect.


beginning January, 1958.\textsuperscript{1}

It is difficult to determine the changes in the relative incentives of collective, versus private labour inputs. The government did instigate negative pressures on private cultivation for almost a decade following 1955 through reducing the size of private plots and 'encouraging' the sales of livestock to collective farms.\textsuperscript{2} After the fall of Khrushchev in 1964, the strict enforcement of the regulations regarding the size of the private plots and the amount of private livestock owned was lifted by the new leaders. Undoubtedly the various agricultural reforms that were introduced between 1953 and 1966 changed the relative incentives of private versus collective labour, nevertheless, on an absolute basis, the level of remuneration for labour inputs remained heavily in favour of private household plots throughout this period.\textsuperscript{3} The introduction of guaranteed minimum pay for collective farm work, based on state farm pay rates, will undoubtedly increase the attractiveness of collective farm labour. Whether the increased remuneration for collective farm labour inputs will be sufficient to shift the balance of labour incentives in favour of collective production, is as yet, uncertain.

The system of labour remuneration and incentives for state farm personnel differed considerably from the methods used

\textsuperscript{1}Ibid., p.134.

\textsuperscript{2}Between 1957 and 1960 the average size of household plots were reduced by 9 percent while private holdings of cattle decreased by 19 percent. (Ibid., p.145.)

\textsuperscript{3}Nove, The Soviet Economy, p.212.
in the collective farm sector. State farm directors, other
lower-level administrative personnel, and agricultural special-
ists were paid a basic monthly salary; the salaries varying in
accordance with the responsibilities and skills involved in the
specific positions. Seventy percent of the basic yearly salary
was paid out at monthly intervals, while the remaining 30 per-
cent was accumulated and distributed at year end, in accordance
with the proportional fulfillment of the output plan.¹ State
farm workers are paid in accordance with wage rates and output
norms established by the central authorities. Pay rates are
differentiated in accordance with the skill and effort involved
and the normed daily outputs established for each task. Indi-
vidual workers are paid on a piecework type basis, their actual
daily wages varying in proportion to their fulfillment of the
output norm for their jobs.

Prior to 1961 state farm workers received their full
piecework wages, regardless of year-end plan fulfillment.
During this year the wage system was modified; henceforth the
workers were to receive 80 percent of their basic piecework
wages, the remainder was to be paid out at year end, in accord-
ance with the proportional fulfillment of the output plan.²
Aside from the wages and salaries paid, all state farm person-
nel are allotted private plots of approximately one acre. Out-
put from these plots is for personal consumption only and cannot
be sold on the collective farm markets.

¹Allan Gruchy, Comparative Economic Systems, p.736.
²Allen Ballard Jr., "Problems of State Farm Administra-
Bonuses for overfulfillment of planned outputs followed a system very close to that used in industry prior to the 1965 reforms. Bonus payments were made by allocating 5-12 percent of over-plan profits to the enterprise fund. Managerial bonuses were paid from this fund, while worker bonuses for over-plan fulfillment were limited to the bonuses in kind received from the enterprise fund and to extraordinary bonuses in cash.¹

The gradual conversion of state farms to a system of 'economic self-reliance', that has been taking place since 1967, involved a restructuring of the incentive system for the converted enterprises. Three incentive funds, similar to those organized for industrial enterprises after the 1965 reforms were formed to provide bonuses for both worker and managerial personnel. Financing of the incentive funds is provided by the distribution of planned net profit, allocated in the following manner: 15 percent to the material incentive funds; 10 percent to the social-cultural and housing fund; 20 percent to the insurance fund; the remainder being used to repay bank credits, supplement working capital, and finance central investments.² Over-plan profits are distributed in a similar manner with lower norms being used for allocations to the incentive funds to discourage

¹For each 1 percent of overfulfillment of the plans for sales (production), managerial personnel received bonuses of 0.3 percent of their base annual salary. ("On the Salaries of Managerial Personnel and Specialists of State Farms and other State Agricultural Enterprises", Pravda, April 22, 1965. Translated in the Current Digest of the Soviet Press, Vol.XVII, No.1, 1965, p.10.)

²Clarke, "Agricultural Reforms Since Khrushchev", pp.163-164.
farms from seeking easy assignments. Total allocations of profits to the material incentive fund is limited to a maximum of 12 percent of the farm's wage fund, but unlike industry, where the free remainder of profits is transferred to the budget, all profits are retained by the state farm.

1Ibid, p.164.
CHAPTER III

TRADE

The following chapter on trade will be divided into two major categories; retail trade, and foreign trade. In the study of retail trade three areas of investigation will be pursued; the planning and organization of trade, retail prices, and microeconomic financial controls and incentives. The planning processes utilized in light industry will be distinguished from those discussed for heavy industry, and the modifications that have occurred in the allocative mechanics utilized for retail trade in the past two decades will be examined. In the section dealing with foreign trade the planning and administrative systems used to determine and control foreign trade flows will be scrutinized. The study of foreign trade will conclude with an examination of the prices applied to traded commodities, the methods used to finance trade flows, and the recent reforms undertaken in the methods used to finance intra-bloc trade.

Retail Trade

Planning and organization of trade

It was shown in the previous discussion on the formulation of the annual plan that the planning of consumer goods production was an integral part of this projecting process. Previous to the compilation of the annual production-supply
plan, fundamental decisions as to the distribution of the national income between producer and consumer industries were made by the Party leaders on the basis of their political-economic objectives. Consequently, the planning and allocation of consumer goods is circumscribed by these basic decisions regarding the allocation of resources to light industry. Retail trade planning is therefore a matter of deciding on the production mix within the confines of the resources available, and distributing the final products in a manner that will best satisfy consumer demands.

Planning the production of consumer goods closely resembles the annual planning techniques described for industrial goods in general. Consumer goods are also evaluated with regard to their importance and/or scarcity and are classified as funded goods, regulated goods, and non-priority or locally produced goods. Similarly, planning for the production and allocation of these goods varies according to importance. Funded commodities are planned and allocated by the All-Union Ministry of Trade and Gosplan while regulated commodities are planned and allocated by the corresponding organs at the union-republican level. At these various planning levels preliminary production and allocation plans are drawn up taking into account orders received in the previous planned year, and past and projected capacities of light industry. The draft plans are then passed through the hierarchy of trading organs, where they are progressively disaggregated, until they reach the individual retail outlets.

The retail outlets then place preliminary orders, based
on their draft allotments and individual experiences regarding sales trends and seasonal requirements, with their respective local trade organizations (torgi). The various torgi summate the orders of their subordinate stores and pass them back up through the administrative hierarchy, after having made the necessary modifications to the aggregated orders based on city and area budget studies conducted by the Central Statistical Administration. These aggregated orders are then used in planning the output, structure, and allocation of consumer goods. Within the limits of the productive capacity of light industry the various goods are allocated by material balances showing the expected output and demands for the commodity. Where supply is inadequate relative to ex ante demand, the allocations of goods are distributed on a pre-determined priority basis, or the allocations are pro-rated and price adjustments may be made to equate ex ante demand and supply. The planning methods described above are only applicable to the allocative mechanics utilized for funded and regulated goods. Non-regulated goods are allocated by means of direct contractual arrangements between the buyer and seller.

Normally the retail stores order goods, in accordance with their approved quotas, from their torg administration which fills the order from its own stocks. In the event of insufficient stocks, the order is passed up the hierarchy to whatever level necessary which fills the order and ships it directly to the retail outlet. Each warehouse in the trade hierarchy replenishes its depleted stocks by ordering the required goods from its superior trade organ. At the top level, the wholesale
warehouses, replenish their stocks from orders submitted to the factory via the sales administration of the producing ministry.

The administrative reorganization of 1957-1958 had significant effects on the planning system described above. The All-Union Ministry of Trade was abolished and some of its planning functions were shifted down to the republican, sovnarkhozi, and other lower administrative levels, while Gosplan, U.S.S.R., assumed responsibility for the planning of funded commodities and the overall coordination of the trading organs.

Large reductions in the number of centrally planned and allocated goods were also carried out at this time and have continued to decrease in number up to the present time. Distribution of the majority of consumer goods now take place through direct contracts between the producer and various trade organizations, down to the level of the larger retail outlets. To facilitate these direct contractual relationships, trade fairs for different branches of light industry have been held during the summer months in increasing numbers since 1957. During these fairs new orders are placed by the trade organs and larger retail outlets with producers, and old stocks of wholesale and retail organizations are readjusted among themselves according to their needs. Before the onset of the next plan year detailed contracts, specifying assortments, method of payment, and

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1 The movement toward direct negotiations between producers and trading organizations was intensified after the introduction of the 1965 reforms.

2 Surplus commodities of wholesale and retail outlets are sold to other trade organizations who have shortages of those commodities.
delivery dates, are drawn up on the basis of the previously established orders.

The vast majority of all retail outlets are subject to the planning and distribution system described above, the major exception being the collective farm market outlets. These kolkhoz markets provide an outlet for the collective farms' and individual peasants' surplus foodstuffs, primarily fresh vegetables, grain products, meat and milk. The markets are supervised by the government to the extent of ensuring health requirements as well as providing and maintaining the necessary stalls for the peasants at a nominal daily fee. Prices in the markets are free to vary with supply and demand, although the government indirectly influences supply by the procurement policies it follows, which affects the amount of surplus production offered for sale, and demand through its ability to satisfy consumer requirements through state and cooperative retail outlets. The following table indicates the increasing degree of divergence between the fixed prices charged by the government stores and the collective farm market prices.

A comparison of the figures in the following table does not directly indicate the real divergence of state prices on comparable commodities from equilibrium levels. Since state prices are set below the market clearing levels for these commodities, the demand in the collective farm markets is largely a residual demand which tends to inflate collective farm market prices above what the equilibrium price would be if all non-processed foods were allocated in a free market. Since state prices are fixed, what a comparison of relative prices does
provide is a rough indicator of the differences in repressed inflationary pressures operative in the economy at different points in time.

### TABLE XI

**INDICES OF SOVIET STATE RETAIL PRICES AND COLLECTIVE FARM MARKET PRICES FOR SELECTED YEARS, 1958-1964**

(1950=100)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>73</td>
<td>107</td>
<td>75</td>
<td>129</td>
<td>75</td>
<td>135</td>
</tr>
<tr>
<td>Meat</td>
<td>66</td>
<td>105</td>
<td>85</td>
<td>121</td>
<td>85</td>
<td>151</td>
</tr>
<tr>
<td>Bread products</td>
<td>59</td>
<td>67</td>
<td>59</td>
<td>100</td>
<td>59</td>
<td>119</td>
</tr>
<tr>
<td>Potatoes</td>
<td>92</td>
<td>119</td>
<td>112</td>
<td>170</td>
<td>110</td>
<td>159</td>
</tr>
<tr>
<td>Vegetables</td>
<td>88</td>
<td>131</td>
<td>90</td>
<td>158</td>
<td>83</td>
<td>161</td>
</tr>
<tr>
<td>Vegetable oil</td>
<td>65</td>
<td>70</td>
<td>65</td>
<td>68</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>Butter</td>
<td>65</td>
<td>87</td>
<td>83</td>
<td>102</td>
<td>83</td>
<td>131</td>
</tr>
</tbody>
</table>


The relative importance of collective farm markets as retail outlets has steadily declined throughout the 1950's and 1960's, and by 1965 accounted for only 3 percent of the total retail sales. However this figure tends to diminish their true importance, in 1965 these markets provided more than 10 percent of the retail sales of foodstuffs to the country as a whole. The declining importance of the kolkhoz markets can in part be

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1S pulber, *The Soviet Economy*, p.105. See Table XII, p.98.

explained by the increasing number of consumer cooperatives, and particularly by the decision of the central authorities in 1953 to allow the cooperatives to accept produce from the collective farms and peasants to sell on a commission basis. The cooperatives sold these consignment goods through their own shops as well as through stalls rented in the collective farm markets, receiving a 10 percent commission on the selling price.  

Consumer cooperatives are predominantly located in rural areas and are the sole retail outlets in many sparsely populated regions of the country. In addition to the non-processed foodstuffs sold on consignment the cooperative stores retail consumer staples, for example, soaps, cigarettes, kerosene, and matches obtained through the government wholesales. The majority of cooperative outlets consist of a small shop, but in populated rural regional centers the cooperatives may be large enough to provide wider retailing services such as specialized food stores, industrial goods stores or small department stores. Ostensibly consumer cooperatives are self-governing entities with officials being elected by the members. In actuality the degree of autonomy exercised by the individual cooperative is

1 Approximately 49 to 51 percent of the rural population belonged to consumer cooperatives in 1965, versus 30 percent in 1950. (Nancy Nimitz, "Consumption Cooperation in Rural Areas in the U.S.S.R.: A Comment", Rand Paper, P-3674, p.4.) Part of the decline in the volume of the kolkhoz markets can also be attributed to the increasing prices paid by the state procurement agencies which increased the incentives for farms to sell more of their above-quota outputs to the government. In addition, the size of the private plots were reduced during this period.

2 Goldman, Soviet Marketing, p.43.
limited, due to the fact that cooperative directors, as well as store allotments of goods and the sales prices of these goods, are determined above the level of the membership. All cooperative wholesales obtain their goods through government wholesale organs, and the distribution of these goods must be made in accordance with the allocation plans and stipulated prices that have been approved by the government. Consequently the amount of control the government exerts over cooperative outlets closely parallels the level achieved over their own retail outlets.

State retail outlets are exclusively located to serve the urban population. The following table indicates the dominant role of government stores in retail sales.

TABLE XII

PERCENTAGE SHARE OF TOTAL RETAIL SALES BY THE THREE MAIN TRADE NETWORKS FOR SELECTED YEARS, 1950-1965*

<table>
<thead>
<tr>
<th>Year</th>
<th>State retail outlets</th>
<th>Cooperative stores</th>
<th>Collective farm markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>63.9</td>
<td>24.1</td>
<td>12.0</td>
</tr>
<tr>
<td>1955</td>
<td>63.2</td>
<td>28.1</td>
<td>8.7</td>
</tr>
<tr>
<td>1960</td>
<td>66.8</td>
<td>28.8</td>
<td>4.4</td>
</tr>
<tr>
<td>1962</td>
<td>67.3</td>
<td>28.4</td>
<td>4.3</td>
</tr>
<tr>
<td>1965</td>
<td>68.0</td>
<td>28.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Adapted from figures cited in Jere L. Felker, Soviet Economic Controversies, p.132, and Goldman Soviet Marketing, p.46. In addition to the above networks special retail outlets, for example, worker supply shops in industrial enterprises, also play a minor role in the distribution of some goods and are included in the figures given for government stores. Producer cooperative sales are included in the figures listed for cooperative stores.

From the above table it is evident that the government and cooperative trade networks are accounting for an increasing proportion of the total retail trade over time. Since both government and cooperative outlets, aside from the latter's
commission sales, are subject to similar controls regarding the planning procedures followed in the allocation of consumer goods and the prices at which these goods are sold, it can be seen that the proportion of total retail trade subject to government controls exceeds 95 percent of the total retail trade turnover.

**Retail prices**

The pricing of consumer goods is carried out with the overall objective of absorbing the total disposable income of the population minus savings, thereby creating a balance between the supply and demand for consumer goods in a macro sense. The basis of retail selling prices is the branch average enterprise wholesale prices. Profit markups of the distribution agencies, varying levels of turnover taxes, and transportation charges are added to the enterprise wholesale price to arrive at the retail selling prices. Of the total value of retail sales in 1965, enterprise wholesale prices accounted for 50 percent while turnover taxes accounted for 40 percent, the remaining 10 percent being taken up by the two trade margins. The distribution of costs and taxes has varied widely among individual items as the turnover tax applied is utilized to manipulate the relative prices of consumer goods.

The turnover tax plays four major roles in the Soviet economic system: it provides the major source of budgetary revenues; it provides a 'cushion' so that price changes may

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1. Industry and retail trade sales organizations add profit markups.
3. Turnover tax as a percentage of total budget revenues.
be made independently at either the retail or wholesale level without necessitating other price adjustments; it is used as an instrument in balancing the overall purchasing power of the population with the supply of goods available; and it is the primary tool used to regulate demand pressures for specific goods. The regulation of demand pressures is done by varying the turnover tax applied either to curtail or stimulate demand in accordance with market pressures, or alternatively to implement desired social policy. When prices are found to be above market clearing levels, the tax may be reduced to stimulate demand, or conversely, when prices are below clearing levels, the turnover tax may be increased to curtail excessive demand.\(^1\)

In other cases the tax rates are set purposely low to establish relatively low retail prices, for example, in the case of children's clothing and reading materials, to encourage the fulfillment of desired social objectives.

The final consideration taken into account in retail price setting is transportation charges. Average transportation charges are assessed against certain goods, for example such commodities as shoes, textiles, liquor, and tobacco, which facilitates uniform countrywide prices. For most other commodities, especially for articles whose transportation costs are equalled 55.8 percent in 1950, 43 percent in 1955, 40 percent in 1961 and 34.2 percent in 1968. (Edward Ames, *Soviet Economic Processes*, p.161. The 1968 figure is cited in Spulber, *The Soviet Economy*, p.184.)

\(^1\)Underpricing of some mass consumption goods is tolerated to reduce the differentials in real income through informal rationing (queuing) which causes deflection of demand of the high income earners to luxury goods.
high, the prices are varied according to the area of consumption. Most products are classified into one of three zones; generally zone one includes districts where a given article is produced, zone two price areas are those into which given articles are imported, while zone three usually covers remote areas of the country. The policy of uniform zonal prices creates uniform prices for all areas of consumption designated as having the same zonal classification for any particular commodity. Ostensibly, zonal price variations reflect differing transportation costs, but they are also utilized to adjust regional demand pressures to the available supply, and to encourage economic aims.\(^1\)

The concept of uniform zonal prices for consumer goods presents a rather exaggerated image of tidiness to Soviet pricing practices. In actual practice the prices charged for a wide variety of goods sold in rural cooperative outlets were, on an average, 7 percent higher than the prices of similar commodities sold in urban areas, regardless of the zonal distinctions.\(^2\) In

\(^1\)In many remote areas of development high money wages are offered to lure the necessary labour force to these areas. High money wages are reduced in real terms and demand is curtailed by the inordinately high zonal classifications placed on many of the consumer goods sold in these areas. Goldman cites the example of food products in Uzbekistan being classified as zone one even though most food is imported. The government subsidizes food prices to discourage peasants from growing their own food, allowing them more time to concentrate on growing cotton. (Goldman, Soviet Marketing, p.93.)

\(^2\)The goods which had premium prices attached to them amounted to approximately 40 percent of the cooperative turnover in the late 1950's. Hence the rural price level as a whole was 2.8 percent higher than the urban price level. (Nimitz, "Consumption in Rural Areas", p.2.)
addition the prices of commodities under the jurisdictions of republican and other lower-level administrations varied considerably between locations, as did the prices of products which were altered in response to seasonal fluctuations or end-of-season inventory gluts.

The major economic reforms undertaken in 1957 had several significant effects on the pricing of consumer goods. Previous to 1957 approximately 80 percent of all retail prices were set by the All-Union Ministry of Trade and Gosplan.\(^1\) With the abolition of the Ministry of Trade during the institutionalization of the sovnarkhozi system of administration price making authority for approximately 45 percent of all consumer goods was decentralized to the republican level.\(^2\) During this period zonal price differentiations were also reduced and rural premiums were eliminated on a number of commodities.

The system of consumer goods pricing has remained stable since 1957, with the exception of the abolition of rural premiums on consumer goods undertaken during the 1965 reforms. The general revision of industrial wholesale prices undertaken during 1966 and 1967 engendered the raising of the factory price of most consumer goods. The increase in enterprise wholesale prices was necessitated by the inclusion of capital charges, which were deducted from enterprise operating profits, which in turn necessitated a higher gross profit level to enable the various enterprises to absorb the capital charges while maintaining a net profit. Retail prices remained unchanged as the

\(^1\)Nove, *The Soviet Economy*, p.152. \(^2\)Ibid.
increase in enterprise wholesale prices was offset by a corresponding reduction in the turnover taxes applied against the various consumer goods.

Financial controls and incentives

The various physical and financial targets assigned and/or approved by the central authorities for state and cooperative trade outlets were similar to the control mechanisms used for industrial enterprises. Both government and cooperative stores operate on a khozraschet basis and were assigned allocations of various goods as well as targets for sales, cost reductions, inventories, credit and profit. Generally the controls faced by both the state and cooperative trade networks were similar. Therefore the systems of controls and incentives to be described below refers specifically to state retail outlets although it is generally applicable to both government and cooperative retail outlets.

Aside from the physical indicators assigned to retail outlets, the financial plan derived from these physical indices provide the main source of control over retail operations. The sales indices assigned for individual products are used to

1 Smaller retail outlets often did not operate individually on a khozraschet basis but were grouped with the financial plans of superior administrative and operational organizations.

2 Specific differences did exist in the controls faced by the two retail trade systems, for example, cooperatives were assigned targets for commission sales and were also allowed to distribute a maximum of 20 percent of their profits as 'dividends' to their members. In addition, the specific rules applying to the calculation of worker bonuses were different for consumer cooperatives but the general principles applied in the calculation of these bonuses were similar to those used for state retail outlets.
calculate the percentage rebates that the outlets receive for the sale of their products. The rebates received vary for individual products, and between similar products, depending on the geographic region of sale. To simplify planning procedures an average rebate is used to calculate gross profit from gross sales revenues. Net profit is then determined by subtracting estimated distribution expenses from the gross profit estimate.

Receipts from the sale of goods are deposited daily and payments for goods and services received are all transacted through Gosbank using similar methods to those described for industrial enterprises. Payments for inventory purchases are made through book account transfers, primarily by means of the acceptance method, or, in unusual circumstances, by letters of credit.\(^1\) Cash disbursements are limited to the payment of wages and very small expenses paid from petty cash.

Working capital requirements needed to finance inventory requirements cannot normally be met from the internal resources of the retail outlets.\(^2\) Additional credits necessary to finance seasonal needs are allocated to the firm by Gosbank, in accordance with the credit plan approved for the retail

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1 Subsequent acceptance methods are used so the retailer may reject unsuitable or shoddy merchandize with relative ease. Prior acceptance methods were tried for a period of time to speed up clearing procedures and thus reduce the level of funds at the disposal of the firm. These methods were found to encourage sub-standard deliveries, which were harder to return once payment transactions had been carried out, and thus were replaced in favour of subsequent acceptance methods.

2 For consumer cooperatives short-term bank loans are used to finance 85 to 90 percent of their inventory holdings. (Allakhuerdyan, Soviet Financial System, p.169.)
outlet. The funds at the disposal of the retail enterprises are segregated into two accounts: a special loan account and a regular transaction account. A portion of the internal working capital is allocated to the loan account and is supplemented by planned credit allowances granted by Gosbank. Proceeds from merchandise sales are deposited daily in the loan account and are used to pay outstanding bills from suppliers and outstanding credits extended by the bank. The regular transaction account is debited for other expenses such as wage payments and payments for utilities, and is replenished by frequent transfers of rebates on goods sold from the special loan account. Through the segregation of accounts, deviations from planned profits can be assessed from the balance of the transaction account while the operational activities of the retail enterprise can be scrutinized by movements in the special loan account.

The incentive scheme used to encourage plan fulfillment up until 1967 was similar to the one operating in industrial enterprises prior to the 1965 reforms. Managerial personnel and store clerks were guaranteed a minimum of 90 percent of their basic monthly salary, the remainder being paid at month end in accordance with their proportional fulfillments of their profit and sales plans. Bonuses were paid for overfulfillment of these targeted indices in progressive amounts, depending on the level of overfulfillment.

The bonus system described above led to unfavourable distortions of assigned plans, especially in the larger retail outlets, due to the conflict of interest between maximization
of material rewards and fulfilling many of the plan indices. Consequently a new bonus system modeled on the same general principles as the incentive system introduced in industry after the 1965 reforms has been implemented in both state and cooperative trading networks.

Foreign Trade

The organization and planning of foreign trade

Since the end of World War II Soviet foreign trade with both Eastern-bloc countries and 'Western' countries has grown rapidly, not only in relative terms of past trade but also in relation to its gross national product. The growth of Soviet trade can be attributed to an increased recognition of comparative advantage, especially among Eastern-bloc countries, as well as to the reduction of international hostilities and their desire to obtain economic influence over 'underdeveloped' countries. The increasing level of external trade has necessitated certain changes in their administrative organization of trade.

1Due to the high progressive bonuses paid for overfulfilling the sales plan, appreciable rewards could be obtained through attempting to minimize the sales target assigned. Through artificially manipulating sales records, by deflating sales in certain months and inflating them in other months, high progressive premiums would be paid for the overfulfillment of certain monthly sales plans, which would more than offset the penalties levied for plan underfulfillment in other months.

2The new incentive system has also been introduced into restaurants and consumer service establishments as well as retail outlets for consumer goods. (Robert Campbell, "Economic Reform in the U.S.S.R.", papers and proceedings of the 81st annual meeting of the American Economic Association, American Economic Review, Vol.LVIII (May, 1968), p.550.)
as well as in the planning and financing of trade flows.

Foreign trade in the Soviet Union is a state monopoly which, up until recent times, was carried out solely through the Ministry of Foreign Trade, U.S.S.R. The trade ministry is primarily an administrative body whose central functions include the formulation of import and export plans, as well as supervising and coordinating the activities of subordinate agencies involved in conducting the operational activities associated with foreign trade.

Implementing the foreign trade plan is the responsibility of the thirty-five trade associations. Each association is responsible for the importing and exporting of a defined number of commodities that are under its jurisdiction. Within its area of authority the association is responsible for the contractual negotiations, the purchases and sales of imports and exports, and the arrangements for export production, transportation, and financing of these goods. Formally these import-export associations are independent legal entities and are thus individually responsible for their own contractual obligations, although in actuality they are wholly owned by the government and are under the jurisdiction of the Ministry of Foreign Trade, U.S.S.R.

The Ministry of Foreign Trade maintains a variety of

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1Alec Flegon, Soviet Foreign Trade Techniques, p.44. The author notes that the above number is approximate and can vary over time.

2In some cases foreign trade associations may specialize in the exporting or importing of a defined group of commodities but in the majority of cases one association is responsible for both activities.
controls over the activities of its foreign trade associations. Direct control is provided by assigning operational plans for each agency; plan fulfillment is observed internally by a network of foreign trade commissioners, and externally by trade delegations attached to overseas embassies, who oversee the activities of the foreign agents of the import-export associations. Commissioners are located in main centres of export production as well as in important port cities and transportation centers. Within their areas they check on the fulfillment of export and import orders, and attempt to ensure that the quality and timeliness of trade orders are in accordance with specified plans. In addition to these physical controls, financial controls over the foreign trade associations are maintained by Gosbank and the foreign trade bank.

During the years following 1955, the monopoly of external trade through a single ministry was rapidly splintered. In 1956 the Council of Ministers, U.S.S.R., created a State Committee for Foreign Economic Relations, which it placed under its own control, and in turn this committee formed a number of subordinate foreign trade organizations. The function of these trade organizations was to arrange for the export of construction equipment and machinery in accordance with the foreign-aid and technical assistance agreements undertaken by the central government. By 1959 seven other state organizations were authorized to conduct foreign trade operations through their own newly created foreign trade agencies.¹ Although these newly created trade

¹Flegon, Soviet Foreign Trade, p.23.
agencies did not fall under the authority of the Ministry of Foreign Trade, the ministry still retained overall responsibility for drafting the annual and long-term foreign trade plans of the economy.

The foreign trade plan is an integral part of the annual and long-term economic plans. The framework of the foreign trade plan is constructed in the control figures calculated by Gosplan during its preliminary formulation of the national economic plan. These highly aggregated control figures for imports and exports are based on preferences indicated by the political leaders, and the preliminary material balances for the domestic economy, i.e. the deficit and surplus balances, and current long-term trade agreements. These control figures are then handed down to the Ministry of Foreign Trade, U.S.S.R., which in turn allocates the appropriate preliminary targets to the relevant trade organizations.

The actual formulation of the import and export plans are carried out by the various trade associations for the products within their various jurisdictions. The import plans of the trade associations are constructed on the basis of estimates of import needs of the economy, which in turn are derived from enterprise import orders, placed with trade associations via their respective ministries, and the import orders placed by 'design' organizations, the various Gosplani and other administrative organs of the central government. The trade organiza-

1 Long-term trade agreements with other countries usually run for a five year period and stipulate minimum trade flows for key commodities, subject to annual ratification.
tions are responsible for checking on the prices and availability of the commodities ordered, obtaining detailed specifications of non-standard import commodities and the terms and mediums of payment required. With the above information the various trade organizations construct their respective import plans in physical terms (categorized into funded and non-funded commodities), the specifications relevant to these commodities, and the corresponding financial plan which relates the price and payment procedures required for the planned imports. The planning of exports involves many of the same procedures followed in the planning of imports. Export availabilities are based on the surplus material balances and are categorized on the basis of funded and non-funded commodities; specifications generally are omitted with the exception of those exports stipulated under long-term bilateral trade agreements. The corresponding financial plan is derived from studies of the export potential of various products by country, as well as the estimated prices and means of payment that can be obtained for these products. Once the draft plans of the various trade associations have been completed they are forwarded to the Ministry of Trade, U.S.S.R.

The ministry must then compile a consistent consolidated foreign trade plan. The initial consolidation is invariably inconsistent with the financial and, to a lesser degree, the physical constraints imposed on the foreign trade plan. The financial balances of the numerous trade association draft plans show varying degrees of overall deficits (or surpluses) as well as individual imbalances among the various trading countries; these are dependent upon the overall trade balance for the range of
commodities handled through the trade organization and the balance of trade achieved in these commodities with individual countries. During the consolidation of trade plans, the total trade flows with each trading partner must be balanced on a bilateral basis in most cases, and an overall balance of trade must also be achieved.\(^1\) Through negotiation procedures with individual trade organizations, their draft plans are revised and a consistent consolidated draft plan for foreign trade is eventually achieved and submitted to Gosplan.

Gosplan incorporates the consolidated draft plan of foreign trade into the various material and financial balances that are utilized in constructing the final draft of the national economic plan. In many cases the original balances on which the initial control figures were based deviate from the final 'corrected' balances used in the final draft of the annual plan. The draft plan of foreign trade is subsequently altered, both in the import and export factors, in order to achieve a consistent national plan.\(^2\)

After approval of the foreign trade plan, fondy for funded exports are distributed to the various trade organizations who in turn use the fondy to place detailed orders with

\(^1\)See n.1, p.112.

\(^2\)In varying the planned imports and exports, Gosplan must also simultaneously maintain an overall balance of trade, unless financing for planned deficits has been obtained. For example, if certain imports must be increased to offset deficits in certain material balances, the increase in imports will in turn necessitate an increase in exports. This situation in turn will necessitate an increase in the demand for factor inputs of these exports, unless new export reserves have become apparent in the revised balances or other previously planned imports are decreased.
the sales administrations of the producing ministries. The ministries in turn allocate these orders among their producing enterprises.¹ The foreign trade associations may at any time during the planned year modify or cancel their orders, in accordance with their success in negotiating the sale of planned exports, and the specifications contained in the completed contracts. In the case of imports, the recipient organizations are allotted fondy for their import orders which have been approved. The fondy permits the recipient organizations to place detailed specific orders with the appropriate trade organizations. On the bases of the orders received, the trade organizations commence appropriate negotiations with foreign producers to purchase the required imports.

The pricing and financing of foreign trade

The domestic price structure of the Soviet Union is not based on relative scarcity ratios, and therefore cannot be used to determine comparative advantages; for this reason comparative prices are not used as a basis for determining trade flows. In the previous discussion on the construction of the import plan, it was shown that decisions to import were made on the bases of insufficient domestic supplies and/or the lack of available technology to produce the supplies necessary for fulfilling the economic plan. The primary function of exports is to provide

¹During the period of regional economic councils, the specifications for funded and centrally planned exports were sent to a coordinating body, who in turn distributed the orders among the various sovnarkhozi, who in turn distributed them among their subordinate enterprises.
the necessary foreign exchange needed to pay for the planned imports. Since the bulk of exports are 'surplus' production having low marginal use value, while imports have a high marginal utility, the differences in their relative utilities provide a rather loose substantiation of the benefits of foreign trade.

The prices charged and paid for export and imports generally approximate the estimated current competitive 'world price' for the commodity. Most of the trade with Western countries is transacted at 'world prices' while intra-bloc trade prices are based on 'world prices' averaged over several years to adjust for fluctuations arising out of 'market anarchy'. When trade was carried out on a barter basis, the terms of trade established the relative prices paid for the commodities exchanged. In the case of commodities that could not be compared to 'world prices' because of their peculiarities or unique attributes, for example in the case of ships or complex electronic equipment, then a bargained price is established.

The sole function of the Soviet commercial exchange rate is to facilitate the accounting of trade flows; it has no relation whatsoever to the internal price level of the country.¹ Foreign trade associations buy export commodities from producer sales administrations at official internal prices, net of turn-

¹The Soviet Union has a dual system of exchange rates, one rate for commercial transactions and the other rate for non-commercial transactions. Ostensibly the non-commercial exchange rate is supposed to reflect the relative purchasing power differentials between countries, but in reality is highly favourable to the Soviet Union.
over tax. Revenues from export receipts are converted by the foreign trade bank into domestic currency at the official exchange rate. Payments for imports are made by the foreign trade associations converting the necessary amounts of domestic currency needed to pay for its purchases at the official rate of exchange. Imported commodities are then sold to the domestic purchasers at the official internal price. By monopolizing all foreign trade the import-export agencies effectively separate internal domestic prices from external prices. The only effect that the official exchange rate has, is that it determines the size of the local currency equivalents of exports and imports, which affects the transaction balances required by the trade associations.

The non-convertibility of the ruble restricted the methods available for financing trade flows. Up until 1964 the methods used for financing inter-bloc and intra-bloc trade flows were similar; the bulk of all trade was conducted under bilateral trade agreements between the trading partners that provided for an ex ante balance of trade. Clearing accounts were opened at the central banks in the names of the trading partners and a system of swing credits was organized to facilitate clearing when import receipts from the specific country did not balance with export payments at a point in time. If there was an ex post imbalance of trade at year end the most common method of obtaining a balance was to arrange for an offsetting ex ante imbalance for the following year.

The method described above was used to finance all intra-bloc trade flows as well as the majority of trade
agreements negotiated with the governments of 'underdeveloped' and developed (i.e., Western-bloc) countries. The remainder of inter-bloc trade is financed through direct barter transactions, and payment of acceptable convertible currencies for imports received or exports sold. In the case of payment in convertible currencies, the foreign trade plan accounted for the amounts and timing of imports paid in convertible currencies, as well as for the accumulation of the necessary foreign exchange through the timely sale of appropriate quantities of exports.¹

Soviet trade with developed Western nations, whose currencies were convertible, only necessitated an overall balance of trade with those nations, as individual trade deficits could be offset with surplus trade balances with other countries in this group of nations. In the case of all intra-bloc trade, which accounted for the major proportion of Soviet trade, an equilibrium balance of trade had to be negotiated with each country. This created a situation where imports from a specific Eastern-bloc country were limited to the value of exports desired by that country and conversely. With the growing volume of intra-bloc trade the problems associated with balanced bilateral clearing became more exaggerated; the creation of the International Bank for Economic Cooperation (IBEC) was an attempt to institute an intra-bloc system of multilateral clearing.

¹The Soviet purchases of Canadian wheat in 1963 were of an unplanned nature and therefore were not provided for in their foreign exchange plans. Although large credits were provided, the additional convertible currency needed for the purchases was partly obtained through the sale of gold in Western markets.
In late 1963 Bulgaria, Czechoslovakia, East Germany, Hungary, Mongolia, Poland, Romania and the U.S.S.R. signed an agreement which created the IBEC. Member countries appointed three representatives each to the Council of the bank, and the Council was to have ultimate authority over the bank's affairs. Each member country had one vote and all decisions of the Council were to be unanimous.

A new monetary unit called the transferable ruble was created to facilitate accounting and to provide capital for the bank.¹ The bank's statutory capital was set at 300 million transferable rubles and each member was allocated a subscription quota proportional to its total trade turnover with participating member countries.² In 1964 each country paid 20 percent of its subscription quota, with 20 percent payable each following year until the bank's capital was fully subscribed.³ Subscriptions were payable in gold, convertible currencies and transferable rubles. Transferable rubles were obtained by having a net credit balance of payments with other trading partners.

¹The declared value of the transferable ruble was 0.9874 grams of pure gold. (L. Suiliaeva, "Currency and Financial Cooperation Among Comecon Members", in Contemporary Soviet Economics, ed. by Murray Yanowitch, p.158.

²The subscription quotas, in millions of transferable rubles, of the participating countries were as follows: Bulgaria, seventeen; Czechoslovakia, forty-five; East Germany, fifty-five; Hungary, twenty-one; Mongolia, three; Poland, twenty-seven; Rumania, sixteen; U.S.S.R., 116. ("Agreement Concerning Multilateral Settlements in Transferable Rubles and the Organization of the International Bank for Economic Cooperation", American Review of Soviet and East European Trade, Vol.II (January-February, 1966), p.11.)

Since it is mathematically impossible for all of the Eastern-bloc countries to have a net credit position vis-a-vis each other, it is thought that the U.S.S.R. provided most of the necessary capital by running deficits with each of its trading partners.¹

The mechanics of clearing take the following form. All payments for goods and services as well as external credits or loans are made by book entry at the IBEC, or with its consent, in the banks of the contracting parties. In the latter case the bank of the exporting country sends the appropriate payment forms and title-to-goods documents directly to the bank of the importing country. These banks are obliged to provide daily information to the IBEC of the transactions undertaken for their import and export agencies. All reported transactions among member countries are recorded by the IBEC at the end of each working day and the daily net positions of each member country are determined, i.e., all bilateral balances are combined into one multilateral balance and a net position with the bank is obtained.²

Member countries who have a short or long-term trade surplus may place their export earnings in either current or time deposits. Interest on current accounts is 0.25 percent per annum, while interest on time deposits range from 0.5-1.5

¹Ibid, p.136.

²The primary method of payment used is the subsequent acceptance method which permits immediate book account transfers once the goods have been shipped, thereby reducing the need for trade credits.
percent per annum, depending on the duration of the deposit.\(^1\)
The bank also extends seasonal and clearing credits to countries experiencing temporary deficit balances beyond their quota contributions; these credits are provided interest-free if the total credit outstanding does not exceed 2.5 percent of their overall trade turnover.\(^2\) Interest charges are levied on outstanding credits beyond this amount, the rate on seasonal and clearing credits being 1.5 percent and 2.0 percent per annum respectively, while a penalty rate of 3.0 percent per annum is levied against overdue credits.\(^3\) Member countries may also obtain credit in convertible currencies from the bank, up to a maximum equal to their quota contributions that were paid with gold.

Under the new system of settling accounts, the bilateral balancing of trade with each member country is no longer obligatory; each country's foreign trade balance for intra-bloc trade will be satisfied if there is a net overall balance of trade with other member countries.


\(^3\) Babitchev, "The International Bank for Economic Cooperation", pp.138-139.
CHAPTER IV

AN EVALUATION OF THE ECONOMIC REFORMS UNDERTAKEN IN INDUSTRY, AGRICULTURE, AND TRADE, 1950-1970

The previous three chapters have been concerned with examining the modifications made in the allocation mechanics utilized in industry, agriculture, and trade in the past two decades. The following chapter will analyse the deficiencies of the Stalinist forms of allocation mechanics utilized in the above-mentioned sectors of the economy, and will assess the successes and shortcomings of the modifications made in their respective guidance systems to the present time. The chapter will conclude with a discussion of the conflict between central planning and the market, and the inherent deficiencies in the Soviet forms of allocation.

Industry

Evaluation of the production-supply planning system and the reforms undertaken in that system

In the Soviet Union the desire for direct centralized control over economic activities has resulted in the elimination of market mechanisms for producer goods and intermediate products. The alternative form of allocation mechanics chosen as a substitute for market forms of allocation is provided by the centralized planning of production and distribution decisions. The criteria used to evaluate the production-supply planning system
will be the following: given that there are centralized expectations as to the quantity and quality of goods desired, how realistic are these expectations, and how efficiently does the planning system 'fulfill' these ex ante expectations. In my evaluation I will first examine the basic methodological deficiencies that were inherent in the planning system throughout the period being considered, because it is in this area that the fundamental deficiencies of the system are found. The evaluation will then consider the reforms that the system has undergone in attempts to remedy the basic deficiencies which are constituent to Soviet planning methodology.

The source of many of the difficulties that the Soviet Union has experienced in its system of allocation mechanics lies in the methods used to determine industrial output potential, and in the allocation of the necessary supplies to facilitate the attainment of production targets. Specifically, the unrealistic and inconsistent plans may be attributed to five factors: 1) exaggerated expectations of potential outputs or taut planning; 2) the methods of aggregating and disaggregating economic information; 3) the methods used in material balancing; 4) the sequence of plan formulation; 5) the deficiencies in the supply system.

The basic proportions of aggregate production are determined by Party and government leaders. Basing their decisions on an analysis of aggregated data on the past and projected year-end performance of the various sectors of the economy, the degree of capacity utilization and other relevant factors, directives are issued detailing specific output targets for
priority sectors and the desired growth rate of the economy as a whole. These directives then form the basis of Gosplan's task, which is to formulate specific production goals to fulfill these centralized expectations. The problem that arises is that both the central directives pertaining to the desired growth rates, and the resulting control figures established, are unrealistic in terms of the resources available and the feasible improvements in labour productivity. These exaggerated expectations arise out of a combination of imperfectly aggregated information, which gives a distorted picture of the productive capabilities of the economy, and the desire of the leaders to achieve maximum growth rates through the 'full' utilization of productive resources. ¹ This propensity for over-full employment planning continues and increases at each level of disaggregation as the control figures are disseminated down through the administrative hierarchy to the level of the enterprise.² Aside from this tendency of formulating taut expectations of resource usage, unrealistic control figures originate from the methods of aggregation used to calculate the various past and projected inputs and outputs of the previous planned period. The resulting distorted data are used to provide the foundation for the central government directives, and the resulting control figures calculated by Gosplan.

In order to allow for the aggregation of the multitude of separate inputs that are needed to produce a given quantity

¹To avoid underutilization of resources, taut planning practices are, to a limited extent, necessary.

²See n.1, p.3.
of output, and to coordinate these quantities at all the various stages of production into an integrated system, technical-economic indices or norms are calculated. Essentially these norms are indices of inputs per unit of output or the reciprocal calculation. Three types of norms are prevalent in the planning process: arithmetical norms, progressive-average norms and technically established norms. Some examples will help explicate the derivation of the above norms and the problems inherent in their use. The arithmetical input norm for labour in the chemical industry would be derived by the summation of empirical labour inputs for every chemical enterprise, divided by the summed gross output of these firms. The progressive-average input norm for labour in the above example is calculated as the average of the lowest input norm of the best enterprise, and the arithmetical input norm. Technically established norms are derived from empirical research, in this example, labour time studies, as to the technically feasible minimum labour inputs. To continue the example further, suppose that the arithmetical norm for labour inputs per ruble of output is calculated for one chemical firm and the firm wants to increase production in one of its outputs so as to raise its gross output by 5 percent. To increase its labour force by 5 percent to allow for the required increase in one of its outputs may well over or understate the necessary labour requirements for that product. This is precisely the problem inherent in the use of norms. As the level of aggregation increases the level of generalization increases, which consequently increases the level
of distortion. At each level of aggregation greater amounts of heterogeneous output assumes homogeneity. At the Gosplan level the highly aggregated norms represent inaccurate technical coefficients as a result of the cumulative errors made in the process of aggregation. The vast majority of the norms at this level are synthetic coefficients relating inputs to outputs for wide groups of enterprises. Only a fraction of the aggregated norms are systematically built up from their output-weighted components. It is these technical coefficients that furnish the information used by government leaders in deciding their directives, and to Gosplan, who utilizes these norms to construct a 'rational' balanced plan.

In the last two decades there has been an increasing tendency for Gosplan to replace arithmetical norms by average-progressive or technically established attainable norms in the construction of their control figures. The objective of following such a practice is to provide an appropriate stimulus for increasing productivity by 'forcing' the dissemination of technological advances. Although this practice may have stimulated innovation or the adoption of new techniques in some instances, the more frequent result was to increase the tautness and the level of underfulfillment of planned expectations.

Obtaining consistent plans is further aggravated by the method of balancing used to obtain equilibrium in the ex ante supply and demand of resources. Material balances are drawn up

\[1\] The output mix of some industries is so complex that inputs can be determined only in relation to the gross value of output rather than each separate product.
for wide groups of materials and equipment. Thousands of these balances are drawn up during the construction of the annual plan and the objective is to simultaneously close all the primary, intermediate, and final demand and supply balances. The enormity of such a task, under the methods used, renders success impossible. Due to the high degree of interrelatedness among the various balances, when a commodity has a deficit balance an increase in production of the commodity is only utilized as a last resort to close the deficit balance.¹ The most frequent method used in closing deficit balances is to decrease the consumption of the deficit commodity through reducing the input norms of the consumers of that commodity. Thus the tautness of the plan is increased in order to obtain apparent consistency in demand and supply. When deficit balances are closed by an increase in production, all of the related balances containing the inputs of the deficit commodity must be altered accordingly. This in turn makes for recalculations of the balances containing the inputs of the inputs of the initial deficit commodity to be increased, and so on. These necessary iterations, in actual practice, are not carried out due to the enormity of the task. Gosplan economist A.N. Efimov states, "...recalculations may be limited in practice to balances directly effected by the changes. Balances related to the original change by second, third, fourth, etc., order linkages are only altered where changes are significant".²

¹See n.2, p.5.

The results of the above practices are concealed inconsistent balances. The consequences of the inconsistencies are that even if all the input norms are met by the firms affected by these de facto deficit balances, a number of these firms will have inadequate inputs to meet their output targets. The effects of unfulfilled output plans will have repercussions on the productive capabilities of those firms which utilize the outputs of the firms initially affected, and so on throughout the system. In reality the effects of deficit balances, and/or unrealistic input and output targets, can be mitigated by the inventories, or 'government reserves', held at various levels in the administrative hierarchy. A determined effort is made to ensure priority sectors are adequately supplied; consequently the enterprises that produce low-priority output bear the brunt of inadequate supplies.

It can be assumed that the problem of inconsistent material balances has been increasing with the development of the economy. In the course of economic development the proportion of final demand to total output can be expected to fall, while the number of firms consuming each others outputs, either directly or indirectly, will increase. This will have the effect of slowing down the convergence process of any method of iteration used. Therefore any given number of iterations will produce larger errors with the growth of the economy over time.

The increasing use of input-output techniques during recent years in plan formulation, especially in checking the consistency of material balances, may eventually offer a
solution to plan imbalances arising out of insufficient consideration of the linkages among the material balances. Input-output techniques lend themselves to computer calculations which enable sufficient calculations to ensure the internal consistency of the plan.\(^1\) Although input-output techniques can theoretically enable the calculation of a consistent plan, inherent limitations in these techniques make them unusable as aids for constructing a rational plan.\(^2\) An internally consistent ex ante plan would only reduce the level of error in plan formulation under current planning practices; so long as planning tautness is maintained through the use of unrealistic input coefficients, there will be ex post deviations from the plan.

Further deficiencies in the Soviet form of allocation are evident in the sequential planning pattern and the specification of gross output targets into detailed orders. Once the enterprise receives its output targets and input allocations, it specifies the exact requirements of its gross input allocations on the basis of its approved tentative plan. The transformation of output targets into specific contracts occurs several months after the firm has submitted its detailed list of required

\(^1\)If unrealistic input coefficients are used in formulating the plan, the 'mathematical consistency' of the plan is only theoretical and it will prove to be inconsistent on an applied level.

\(^2\)The limitations inherent in input-output techniques are the following: 1) they assume constant coefficients, independent of the level of production; 2) they cannot account for technological change; 3) they cannot account for substitution possibilities; 4) capital equipment cannot be taken into account. (Herbert Levine, "Centralized Planning of Supply in Soviet Industry", in The Soviet Economy: A Book of Readings, ed. by Morris Bornstein and Daniel Fusfeld, p.64.)
inputs. Consequently, when detailed inputs cannot be matched with the specifications of individual contracts, either the plans must be changed or the buyers must be induced to accept supplies that were not in accordance with specifications.

The reforms that took place in the planning system between 1957 and 1964 were essentially administrative in nature and had little influence on the fundamental characteristics of the pre-existing system. The division of the economy into 104 regional economic councils was based on administrative, rather than economic, criteria. The sovnarkhozy either conformed to or combined existing divisions of local government and party organizations and were too small to be viable administrative units. The creation of republican sovnarkhozy in 1960, and the division of the country into seventeen large regions in 1961, followed by the reduction of the number of sovnarkhozy from 104 to forty-seven in 1963, were successive attempts to solve the problem of coordinating the activities of those economic units. The large number of administrative units lacked adequate coordination, especially in their research programs, and were also found to be lax in instituting technological advances into their production processes.

The sovnarkhozy system further complicated the complex system of supply planning. Under the ministerial system each ministry had a main administration of supply which was responsible for the distribution of major materials and supplies to all enterprises under the jurisdiction of the ministry. Under the sovnarkhoz system, a number of supply administrations were set up under the jurisdiction of Gosplan, each responsible for
a specific group of material supplies. If an enterprise required five funded commodities for its operations, there would possibly be five supply departments involved in the allocation of these goods. Under this arrangement, achieving consistency in the allocation of required goods became all the more difficult.\(^1\)

In summary the main deficiencies in the production-supply planning system result from the exaggerated and unrealistic plan targets, which give rise to inconsistent plans. These exaggerated expectations arise out of the unrealistic calculation of input norms and can only be solved through refining the aggregating process and by giving individual firms more authority in deciding their input norms. It is only with consistent, realistic plans, and the application of an optimum inventory theory on a national level, that the frequently voiced criticisms of hoarding and maldistributed inventories, black markets, and enterprise expediters can be cured.

**Evaluation of the financial system and industrial wholesale prices**

The need for financial planning arises out of the necessity of using a system of monetary accounting to control the activities of enterprises and agencies in the carrying out of

\(^1\)After the 1965 reforms the administrative system reverted back to the branch of industry (ministerial) system that had existed prior to 1957. The material supply functions carried out by the ministries under the pre-1957 system were abolished to avoid the previous tendencies toward ministerial self-sufficiency. Under the new arrangements, material supply is carried out by Gosplan and a newly formed State Committee for Material Technical Supply.
their economic functions. Through formulating a price system and making economic entities pay for all of the goods and services it utilizes, the multitude of heterogeneous inputs and outputs can be given synthetic expression by assigning a price to each good. Prices become a common measure by which means heterogeneous inputs and outputs can be aggregated, thus allowing the central authorities to exert simultaneous control over the vast array of economic entities. Monetary accounting with constant prices also facilitates inter-temporal comparisons of the performance of economic units, which reflect the relative efficiency of their operations during specific points in time. It is the necessity of having a monetary system of accounting for the purposes of control and accumulation that gives rise to the demand for financial planning in the Soviet Union.

Financial planning neither precedes nor directly determines the formulation of physical plans for the economy. Rather, the financial plans are a reflection of the monetary equivalents of the physical variables that compose the physical economic plans. Although financial equivalents of physical plans are used to check the coherency of the physical plans and the functional relationships between various physical plans they are seldom used as the principal indicator as to how physical imbalances in these plans may be rectified. The lack of reliance on financial criteria in economic planning stems from the fact that the price system, which provides the means for all financial calculations, is compartmentalized and lacks coherency. Only a price system which reflects the true scarcity of resources, vis-a-vis the demands of the central authorities, or alterna-
tively of consumers, can provide a basis on which financial magnitudes can be used to provide directive guidance as to the utilization of resources in the economy.

The price system in the Soviet Union does not exhibit the above characteristics. Prices are not formed by the interactions of supply and demand which equates the scarcity of a good with the overall demand for that good by arriving at an appropriate value through the interaction of these two forces in the market. Market mechanisms in the Soviet Union have been largely replaced by an allocative system which utilizes administrative apportioning to achieve a balance between supply and demand. Where markets are utilized as an allocative mechanism, for example in the distribution of consumer goods, it functions under restricted conditions where the relative prices are set and inflexible, thus eliminating any reactive feedback through the price mechanism.

The basis of the price structure is provided by the general principle that prices at the enterprise wholesale level reflect the average cost of production for the good in question plus a profit markup. The Soviet methods of calculating costs are incomplete in the sense that land costs, depletion costs, and until recently capital costs were all excluded from cost calculations, and depreciation costs were undervalued in relation to the true rate of deterioration of capital assets. The result of the above exemptions is that the economic costs attached to the utilization of capital, land, and the depletion of natural resources were not accounted for. These omissions had the effect of distorting relative costs in favour of the
capital intensive and extractive branches of industry. If one ignores the above deficiencies there is a tendency toward rational relative costs for producer goods in that the labour costs, which account for the major proportion of total costs, are derived from the prices paid for labour. Although wages are set by the state, the formulation of labour wage rates are arrived at through a de facto labour market. Due to the occupational freedom that now exists in the country, wages are set to achieve the desired distribution of labour, taking into account the educational levels and required skills as well as the geographical location of areas of demand.

Within the realm of industrial wholesale prices for producer goods modifications are made in the relative prices of close substitutes in an attempt to adjust these prices toward their relative scarcities, thereby achieving appropriate substitution ratios.¹

The previous discussion on the role of prices in the Soviet economy noted that prices provide a guide to planners in the selection of substitutes to close deficit material balances, in the choice of alternative investments, and also in decisions regarding the detailed production functions of new enterprises and the benefits of modernizing old facilities. Closing material balances by the substitution of less scarce commodities, as shown by their relative prices, probably does not result in serious sub-optimization of resource use as

¹It was previously noted that the 1963 price revision was primarily directed toward reflecting structural changes in the economy, vis-a-vis the extractive industries and the nation's 'fuel balance'.

consideration is given to scarcity factors in setting the relative prices of close substitutes. Consideration of the level of total costs that influence decisions regarding alternative investments and production functions of firms undoubtedly result in considerable sub-optimal resource use in that the relative prices considered deviate further from their scarcity values. Regardless of what relative prices or groups of prices being considered, if prices are used for directive criteria in the allocation of resources sub-optimal resource usage will result. Even in the case of closely substitutable products where relative scarcities are considered in fixing their prices, the Soviet practice of fixing prices for extended periods of time does not allow for structural changes in the economy to be reflected in prices during the time period between price revisions.

The irrationality of industrial wholesale prices, specifically those for producer goods, has assumed greater dimensions with the introduction of profit (profitability) as the principal success indicator that occurred after the 1965 reforms. Relative cost-price ratios now assume paramount importance to the enterprises in their attempt to fulfill their profit plan, but these cost-price ratios in no way reflect the relative scarcities of the goods produced by the firm. Under these circumstances the physical stipulation of output assignments must remain and flourish.¹

¹Without physical assortment targets, enterprises would avoid the production of low-profit commodities even though the utility of these goods may be very high. A similar situation exists with the allocation of inputs to industrial firms; the under-pricing of producer goods necessitates the administrative allocation of many materials and equipment to priority areas of
The greatest modifications to enterprise wholesale prices occur with the addition of turnover taxes to consumer goods.\(^1\) The following table shows the degree of modification in consumer goods prices from the application of turnover taxes.

**TABLE XIII**

**COMPOSITION OF INDUSTRIAL WHOLESALE PRICES, 1964\(^*\)**

<table>
<thead>
<tr>
<th>Production and Marketing Costs</th>
<th>Profit</th>
<th>Turnover Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer goods</td>
<td>81.6%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>66.5%</td>
<td>8.2%</td>
</tr>
</tbody>
</table>


Turnover taxes are one of the principal sources of accumulation for the state.\(^2\) All productive processes both inside and outside the state sector generate income which is either spent or saved. Through calculating draft balances of incomes and expenditures of the population, disparities between the amount of disposable income spent on consumer goods and the planned volume of consumer goods available are made evident. Although various alternatives may be followed to mitigate the expansion.

\(^1\)Electricity and fossil fuels are the only producer goods that have a turnover tax applied to them.

\(^2\)Profit deductions, income taxes and other types of deductions, provide additional budgetary revenues, but turnover taxes up to 1965 provided the main source of unencumbered budgetary revenue. The reason for a dual source of income from productive activities is that profits are not assured by the fulfillment of the output plans while turnover tax revenue is assured and can be extracted more rapidly.
disequilibrium, for example raising prices, lowering wages or increasing income taxes, the primary method used to equate supply and demand is to apply high tax rates on new products entering the market. In applying turnover taxes to consumer goods the central authorities generally follow the practice of applying relatively high tax rates to luxury goods and relatively low rates to most mass consumption goods. This practice serves to equate ex ante supply and demand for specific goods as well as reduce disparities in the level of real income between different occupational groups in the society.

It becomes obvious from the preceding analysis that the price structure in the Soviet Union is greatly influenced by the deployment of the price system to achieve a desirable distribution of the national income. The central planners have utilized indirect taxation in the forms of the turnover taxes and profit deductions to provide the bulk of budgetary revenues, rather than resorting to direct taxation as a means for forced saving. In essence, the turnover tax system is an indirect, progressive system of taxation. The compartmentalized price structure of the Soviet Union is largely a result of the utilization of the price system in distributing the national income in a manner appropriate to the aims of the central authorities.

It was previously stated that the primary function of the financial system was to facilitate control over the execution of physical and financial plans. Thus the cash plan provides a synthetic measure of the fulfillment of a variety of other plans which are incorporated into the cash plan, either wholly or in part. Specifically, the degree of fulfillment of
the cash plan reflects the degree of fulfillment of the production plan (via wages), the plan for retail trade, the credit plan, and the plan for agricultural procurements. Similarly, the fulfillment of planned budgetary revenues for turnover and profit taxes provide an additional check on the fulfillment of production plans.

At the micro level, control over enterprise activities is provided by a combination of physical and financial targets, and severe restrictions on the utilization of the monetary funds available to the enterprise. The monetary funds available to the enterprise are held by the state bank and consist of 'cash' and book account balances. Generally cash balances may only be utilized for wage payments and cash disbursements for these purposes must be within the limits assigned by the wage fund for the enterprise. Since 'free' cash provides a high degree of freedom to the enterprise, movements of cash balances receive appropriate scrutiny by the bank officials. The payments for goods received by an enterprise and all receipts obtained through the sale of their output are made by a transfer of bank balances between various branch banks of the Gosbank. In this manner all payments and receipts of an enterprise can be checked for propriety with the enterprise production-supply plan and with the state price lists.

Credit arrangements provide an additional means for controlling enterprise activities. By banning all commercial credit between enterprises and making each enterprise dependent on credit provided by the state bank for financing a portion of their necessary working capital, the idle bank balances are
reduced to a minimum and the daily operations of the enterprise are subjected to 'control by the ruble'. Working capital credits are allocated to the enterprise for planned tasks and in accordance with assigned quotas. Repayment of these credits can only take place through revenues accumulated from the carrying out of planned productive processes. Therefore the fulfillment of the credit plan reflects the fulfillment of the production plan of the enterprise.  

The above monetary controls, in addition to the profit, amortization and turnover tax collections made by the state bank in its capacity as the fiscal agent for the government, must provide rather stringent regulation over enterprise activity. From the numerous articles pertaining to the large hoards of material and equipment kept in enterprise basements and prevalence of 'procurers' on enterprise payrolls it is evident that the combination of physical and financial controls applied to the enterprise are not entirely comprehensive. It is probable that the above transgressions occur primarily out of the ingenious falsifications perpetrated by enterprise managers in their attempt to overcome the deficiencies of the material supply system (which would otherwise reduce their material rewards), rather than from any gross deficiencies in the Soviet financial-control system.

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1 The increased use of mutual offset clearing balances after 1960 was a refinement to other clearing processes in that controlled commercial credit was substituted for bank balances that would otherwise have been necessary.

2 For example, see Margaret Miller, "Markets in Russia", in Communist Economy Under Change, ed. by A. Deutsch, pp.25-28, and Nove, The Soviet Economy, pp.42, 223-227.
The incentive system was supposed to encourage the fulfillment of the targeted indices assigned to the firm by providing material rewards; until the 1965 reforms it was undoubtedly the weakest link in the system of controls over the execution of the plan. Rather than encourage plan fulfillment the incentive system only served to encourage the fulfillment or overfulfillment of those targeted variables to which the incentive system was related, often to the detriment of those targets which were not related to the material rewards proferred to the enterprise manager.

Up to 1958 the principal criterion used to evaluate managerial bonuses was the degree of fulfillment of the gross value of output target. Other indices that affected managerial bonuses, such as cost reduction and assortment mix, were related in such a way that the trade-off between the variables favoured the maximization of output. The consequences of basing rewards primarily on the value of output resulted in the following diseconomies in resource usage: 1) Progressive rewards for the degree of fulfillment of the gross value of output target provided sufficient incentive for managers to deflate their productive capacities and inflate material requirements in the bargaining of plan targets with superior authorities to ensure fulfillment of their assigned targets. 2) The gross output target was either expressed in physical units or in value terms, depending on the standardization of production. Whatever the method of specification used, it lead to its own type of
distortion of plan fulfillment, for example, when output of sheet metal was specified in tons, extra-thick sheets were produced, when the target was specified in square metres, extra-thin sheets were produced. When output was specified in value terms, it resulted in distortions of the product mix in favour of high priced variants and the ordering of the most expensive material inputs to increase the value of the final output.¹

3) Implementation of centrally specified technological innovations was avoided as much as possible and innovation at the level of the enterprise was stifled because the problems associated with new production techniques jeopardized fulfillment of the output targets.

The above problems associated with using gross output as the principal determinant of managerial bonuses lead to a revision of the bonus criterion in 1959. Henceforth bonuses were to be determined by the fulfillment of the cost reduction target as well as the gross output and labour productivity indices. The new criteria lead to its own varieties of plan distribution. Lower quality work and lower cost variants of the output mix were favoured at the expense of high-cost 'mix' targets. Technological innovation was stifled to an even greater degree than before and the practice of deflating plant capacity continued to be profitable.

Various other techniques were tried between 1958-1965 such as tying the target for implementation of technology to

¹For example, spare parts were frequently undervalued relative to the value of these parts in finished units. The consequence of this pricing policy was an acute shortage of spare parts and vast amounts of broken down, unusable equipment.
the managerial bonus scheme and using 'normed value of output' (standard costing), but as real costs diverged from normed costs the system produced its own variety of distortions. Aside from the problems created through the managerial bonus scheme, the incentive funds for workers had little or no effect on encouraging plan fulfillment. The incentive funds were grossly inadequate and did little to stimulate worker initiative. In 1955 the amount of money deducted to the incentive funds amounted to 0.5 percent of the total wage fund for industry.¹

Several other practices that were followed in evaluating and controlling enterprise performance also resulted in creating inefficiencies at the enterprise level. The evaluation of enterprise performance vis-a-vis their planned targets by monthly, quarterly, and yearly time periods lead to production 'storming' near the end of the performance period in an attempt to fulfill the output requirements. The storming techniques had consequent effects on orderly production runs and on the quality of the commodities produced. The practice of dividing the amortization deductions between the budget and the enterprise and allowing the enterprise to utilize its portion only for capital repairs induced many expensive repairs of obsolete equipment. The objective of this stipulation on depreciation funds was to mitigate a tendency for firms to neglect repairs and request new equipment. The overcontrol of depreciation expenses and the undercontrol of capital investment grants lead to expensive repairs of obsolete equipment followed by requests

¹Nove, The Soviet Economy, p.34.
for capital grants to purchase new machinery in the following period. Since capital grants were ostensibly free from the enterprise point of view many unnecessary requests for such grants were made which had the consequences of creating vast arrays of unutilized or underutilized equipment at the enterprise level.

The major reform of 1965 centred on the pre-existing problems of microeconomic control and attempted to revise the structure of controls to stimulate greater efficiency of resource use. The introduction of a capital charge and the relationship of managerial and worker bonuses to enterprise profitability should contribute to reducing some of the absurdities that were characteristic of the pre-reform system. The capital charge, together with the repayment of centralized investment credits is supposed to create disincentives for overcapitalization and excessive investment requests. Although the capital charge, which averages 6 percent for industry as a whole, may be sufficient to provide an adequate disincentive for overcapitalization, the interest charges on centralized investment credits are totally inadequate. Centralized investment credits must be repaid, but current profits are only directed toward repayment of credits after all deductions have been made to the enterprise incentive funds. Since centralized investments are exempted from the capital charge until the repayment of the credits has been completed, the only disincentive (in the short run) against applying for investment credits is the negligible interest charge of 0.5 percent.¹

Creating a new incentive system based on profit and profitability has allowed for a huge reduction in centrally assigned indices. The profit motive is supposed to provide sufficient incentives to maximize the objectives sought by the assignment of the vast array of targets that were characteristic of the pre-reform era. In providing a common incentive system for managerial-administrative personnel and workers, the previous tendency of managers to maximize their own bonuses to the exclusion of worker incentive schemes has been rectified. Worker incentive funds are now based on the same criteria used to evaluate managerial bonuses, thereby creating a common interest in fulfilling the incentive related targets.

Under the post-reform system of administration it is no longer beneficial for enterprise managers to understate their productive potential to the same degree and opt for an easy plan which can be overfulfilled. The normative rates applied to net profits are regressive for both under and overfulfillment of planned profit, which creates some incentive for realistic output planning. The potential benefits that could be derived from reducing the incentive deduction norms for under and overfulfillment of the sales (profitability) targets are partly diminished by the methods used to calculate incentive deductions. Taut planning by enterprise managers is discouraged by the uncertainty of the material supply system and by the fact that deductions to the enterprise incentive funds are dependent on the increase in the level of sales (profit) achieved. By greatly increasing the planned sales or profit targets for any one year, subsequent increases in these indices become
correspondingly more difficult (i.e., the base figure used to
determine profit or sales increases becomes larger).

The profit incentive has also allowed the ostensible
devolution of authority to the enterprise of the preparation of
its production-financial plans. In actuality the firm's degree
of freedom is severely restricted by the centrally assigned
indices of planned profits and materials allocations and by
the fact that all plans originating at the enterprise level
must be approved by higher authorities.

The above observations have centered on the more posi­
tive aspects of the reform in eliminating a number of ineffi­
ciencies that were characteristic of the pre-reform period.
In reducing the effect of a number of these old deficiencies
the new system has also created new sources of conflict with
regard to the incentive system and the desired objectives of
the plan targets, as well as leaving several old administrative
faults untouched.

The normative rates applied to the firm's net profit
for deductions to the material incentive and social-cultural
funds are related to the size of the enterprise wage fund for
the purpose of interconnecting payments to the incentive funds
to the size of the work force. The problem that arises is that
there is a disincentive to remove redundant labour from the
work force, even if it will increase enterprise profitability,
because the enterprise is simultaneously reducing the magnitude
used to calculate the incentive payments.\(^1\) Similarly, with the

\(^1\)An additional disincentive is that the enterprise is
responsible for finding alternative employment.
development fund there is a disincentive for economizing on capital because by doing so the enterprise reduces the magnitude used to base deductions into this fund.

The use of percentage increases in sales (output sold) as one of the principal success indicators will undoubtedly create distortions of the product mix targets in favour of high value items (within the limited discretionary range granted to the enterprise), as well as create a tendency to use expensive materials in the development of new models or products. Although the marketed output target is a significant improvement over the gross value of output target, in that it makes producers more responsive to customer requirements, the degree of responsiveness is somewhat mitigated by the planned allocation of many material supplies and the prevalence of overtaut plans, which create a seller's market.¹

Efficiency in the utilization of capital should improve somewhat because of the capital charges imposed upon the average annual stock of fixed and 'own' working capital. It is questionable whether the average rate of 6 percent will provide sufficient incentives to reduce enterprise capital to a minimum necessary for production.² Aside from the incentive provided

¹The combination of taut supply plans and the administrative designation of supply sources guarantees a market for a large proportion of output sales and reduces the bargaining power of consuming enterprises in rejecting marginally suitable commodities.

²The actual capital charges faced by an enterprise are determined by their ministry (in accordance with their ability to pay under the average gross profit margins established for the branch of industry during the recent price reforms). In many instances, the capital charges will be less than the 6 percent average.
by using the level of capital as a basis for development fund deductions, requests for long-term investment credits will undoubtedly be higher than necessary due to fact that capital so acquired is exempt from capital charges until such time as the credit is repaid. Therefore during the repayment period the effect on profits available for distribution to incentive funds is only reduced by interest charges equaling 0.5 percent¹ (plus whatever effect the new investment has on the rate of profitability). Repayment of long-term credits are only made from that portion of the profit remaining after deductions to incentive funds have been made. Another facet of the investment dilemma facing the central planners is the utilization of the development funds by the enterprise. Ostensibly the purpose of the decentralized investment funds was to allow firms greater autonomy and flexibility in adjusting to the bottlenecks manifested in their output assignments. In actual fact the development funds cannot be used for autonomous expansions of capacities under the present irrational price system. For the above reason, and because most resources used in construction are centrally allocated, the enterprise cannot command real resources for any substantial expansion without having its plans and estimates approved and included in the national investment plan. Thus the increased flexibility introduced into the investment procedure through the creation of enterprise development funds is marginal.²

² In carrying out its 'decentralized' investments the enterprise must first get the project listed in the official
In the area of enterprise autonomy the basic thrust of the reform was purportedly to permit the enterprise greater freedom in planning its own outputs and financial targets as well as increasing the scope of decentralized investment. Although the enterprise may draft its own production and financial plans, they are formulated within the confines of the centrally assigned indices for gross sales, profit and profitability, material supply, etc., and in the course of getting these draft plans approved any revisions deemed necessary by the higher administrative levels are carried out before the plans are approved. It is true that producers of consumer goods can plan their own assortment mix on the basis of orders from retailers but there again the actual freedom is circumscribed by the material allocations made to these firms.

The 1965 reforms did not significantly alter the system of material supply allocation, and until such time as the system is abolished in favour of free wholesale trade, where prices reflect scarcity values, there can be no meaningful decentralization of decision making to the enterprise level.

Agriculture

Agriculture lends itself the least of all types of economic activities to the Soviet form of quantitative planning. Quantitative planning is most effective in a stable, controlled list of projects to be undertaken, and obtain the necessary cost estimates and blueprints. On presentation of these forms to Stroibank, the enterprise is allowed to utilize the approved sums in its development fund.
environment where economic activities are directed toward the production of relatively homogeneous outputs. Under these conditions increased output can be assured by proportional increases in inputs, while the relative efficiency of the production process can be improved through scrutinizing and substituting identifiable inputs. Agriculture does not lend itself well to this type of allocation mechanics. The yields of crops are largely dependent on a propitious climate, and the infinite varieties and peculiarities of local soil conditions greatly restrict the rational feasibility of centrally targeting input-output coefficients and/or cultivation patterns for a vast number of producing units.

Until early 1955 the collective farm units had virtually no control over the planning of activities that were to be undertaken by the farms. The central government determined gross output and procurement quotas for all major crops and livestock production. The gross output targets were in turn disaggregated and allocated to territorial divisions where the process was repeated, and allocations were given to regional, and in turn to local agricultural organs. The local authorities would then use these centrally set indices to formulate detailed output plans for each of their subordinate collective farms, specifying acreages under various crops, the types and numbers of animals to be raised, the sequence of crop rotations, and such like. These output plans which were assigned to the individual farms were not only based on unrealistic centrally set indices but their detailed specification was the product of consultations between several local administrative and
operational agencies, none of which were totally acquainted with the idiosyncracies of the individual producing units.

It is in the centralized determination of gross output and procurement targets that one of the major sources of inefficiency in Soviet agriculture arises. The central authorities often assume the farms to be capable of producing a wide variety of crops with reasonable efficiency. Consequently, they often assign fifteen or twenty output and/or procurement targets for different commodities to each farm, \(^1\) with little regard to the region the farm is situated in and the local conditions of climate and soil which exist there. The consequences of the above directives resulted in a serious lack of specialization in agricultural production and often forced farms to carry out production on a very small and relatively uneconomical scale. The principal reasons for this gross misallocation of resources was mis-information about regional conditions on the part of the central planners and the low level of agricultural production, vis-a-vis the high demands of the urban population, which made the government unwilling to sacrifice its much needed purchases from relatively unsuitable areas. To some degree the low level of agricultural production was undoubtedly due to the lack of rational specialization. As to which factor was the cause and which was the consequence of the above situation, and to what extent the viability of the transportation system

\(^1\)Morris Bornstein, "The Soviet Debate on Agricultural Price and Procurement Reform", Soviet Studies, Vol.XXI (January, 1969), p.17. Within the limits of their imperfect knowledge, and the national demand for various commodities, the central planners do attempt to account for the regional suitability in their assignment of output targets.
affected the degree of non-specialization, one may only speculate.\(^1\)

Aside from the above deficiencies, the centralized production and procurement targets were irrational in their expectations regarding the productive capabilities of the farming units; in part this was due to the Soviet inclination toward constructing implausible plans, and in part to the rather optimistic assumptions regarding climatical conditions. In their determination of gross output and procurement targets, the central planners had no alternative other than to set these indices under the assumption of favourable climatical conditions. To do otherwise, for example, using average harvest figures as a basis for their procurement targets would have resulted in an even greater shortage of agricultural commodities in state retail stores, and massive unplanned flows in the re-distribution of urban-rural income through the collective farm markets in the event of an above-average harvest. On the other hand, the optimistic targets meant that little, if any, of the farms' gross harvest could be sold at the higher delivery prices (which would have increased the incentive to produce). The fact that by the end of 1953 the collective farms owed the government almost twenty-five million tons of grain over and above their delivery obligations for that year is indicative of the highly

\(^1\)Although the government's propensity toward giving limited recognition to the advantages of specialization in its allocation of control figures has been decreasing in the last two decades, the most famous example of the above defect occurred during the late 1950's. Khrushchev ordered corn to be grown in many areas that were well north of the geographic limits for corn cultivation.
arbitrary expectations held by the government vis-a-vis the productive capacity of the agricultural sector.¹

To a certain degree the consequences of irrational centralized targeting, with regard to intra-regional specialization was mitigated, or at least evenly distributed, in the disaggregation and allocation of the control figures to the individual farms through the regional and local agricultural agencies. Gross regional indices would be allocated by the regional authorities, and in turn by the local authorities to their respective farms after some consideration had been given to the size of sown areas, available human and material inputs, and the soil fertility of the individual farms.

The detailed specification of production plans for individual farms was undertaken within the context of the prescribed centrally set indices. Nominal responsibility for plan construction lay at the raion level, where consolidated production plans were established for each farm on the advice of proposals submitted by their agronomic services and by the independent MTS organs. Neither of these agencies were thoroughly familiar with the varied soil conditions that existed on their various subordinate farms and within the individual farming units, yet they were jointly responsible for determining and enforcing seeding and harvesting dates as well as sowing and rotation patterns for the farms under their jurisdiction. While the problem of dual control over the operational activities of the farm was eliminated in 1953 by abolishing the raion

agronomic agencies and shifting the bulk of their responsibilities to the MTS, the reform also eliminated the moderating influence exerted by this body over the MTS operational planning, thus increasing the conflict of interest between the MTS and the farm management. Farm managers desired to maximize farm revenues within the context of their procurement targets, while the MTS, which controlled the timing and utilization of all major agricultural machinery, was interested in overfulfilling the principal quantitative indicators by which its performance was evaluated. MTS work was measured in the number of standard ploughing units; all types of ploughing, harrowing, harvesting, and other mechanized operations were converted into this standard work unit. Since the real conversion ratios of these various activities carried out by the MTS varied from the approved ratios by which it was evaluated, they would carry out work which was profitable to themselves, but which by objective standards was wasteful, and quality was often sacrificed for quantity.

During the early part of 1955 the government decided to abolish the numerous control figures that were centrally determined to guide the regional authorities in their construction of output plans for their subordinate farms. Henceforth the central authorities would calculate only gross procurement quotas for the collective farm sector. The quotas would then be disaggregated and allocated to the raion organs and through them to their subordinate farms, based on considerations of the size of sown areas and number of animals, the fertility of the soils, past delivery records, and other relevant data on their
farm units. The collective farm would then construct its own production and financial plans within the context of their procurement targets. The devolution of plan formulation to the individual farm units did not result in a significant increase in autonomy for the individual collective farms. The high procurement targets that were assigned effectively determined the farms cropping patterns and livestock activities, and the plans were formulated by the farm under the 'guidance' of the MTS and were subject to approval by their respective raion executive committees. It was not until 1958 that the collective farms achieved any significant degree of control over their internal operations. In that year the MTS was dissolved and their equipment was sold to the collective farms; in addition the procurement quotas were substantially reduced. The combined effect of these reforms was to give the individual farms autonomy in the type and timing of mechanized farm operations, in the areas of soil improvement and harvesting, as well as to allow the farm more discretion in their utilization of land and livestock activities over and above the now reduced quota delivery targets.¹

The massive number of amalgamations of collective farms that took place between 1950 and 1965, especially during the first five years of this period, were mainly carried out to simplify the administrative problems of planning and controlling

¹ In many instances increased autonomy over cropping patterns and livestock activities was not achieved due to the continued persistance of many local authorities to target total outputs. Brezhnev, in a 1965 speech, promised that this practice would be stopped.
the implementation of the plans. Along with the simplification of the planning processes, the collective farm amalgamations facilitated greater control of plan implementation through a redistribution of Party forces and improved the financial condition of many weaker farms through their amalgamation with financially stronger farms. It was these latter two factors, as well as the improved supply of agricultural equipment, that contributed to facilitating the dissolution of the MTS at the end of 1957. The overriding disadvantage of the amalgamations of collective farms and their later conversion into state farms, or parts of pre-existing state farms, was that their huge size now made them internally unmanageable. The dogmatic belief of the Soviet planners that increasing the scale of operations was tantamount to increasing the efficiency of operations had in many cases resulted in the reverse effect. American studies on optimum farm size indicate that Soviet farms are several times too large for efficient operation.¹

The problems of planning and controlling the implementation of plans on state farms were parallel to many of the problems that have been examined for the collective farms. The centralized determination of purchase targets limited potential specialization of production by effectively determining the cropping patterns. Although the state farms did not suffer from the dual supervision that was exerted over their collective

counterparts up to 1957, they suffered from internal management problems due to their huge scale of operations and excessive supervision by Party and local officials in their attempt to control the implementation of plans, the over-zealous supervision after interfering with farm operations. One problem that was unique to state farms was the disaggregation of control figures regarding state purchases. The same problems arose as in industry with the tentative distribution of output assignments. State farm managers would attempt to deflate the output capabilities in an attempt to obtain output targets which could be easily attained, thereby ensuring their material rewards for plan fulfillment. Although this problem will be reduced by the conversion of the state farms to a profitability related incentive scheme, it was a significant source of inefficiency for these farms in the past.

The deficiencies in agricultural planning and plan formulation not only led to the inefficiencies examined above; they created other problems in that the errors in planning ramified through the allocative system. The invariably optimistic expectations regarding agricultural output also served to distort other plans which were functionally related to agricultural production. Thus the deviations of ex post results from ex ante expectations created corresponding distortions in the

1 Many examples are cited by Alec Nove in his article "Incentives for Peasants and Administrators", in Was Stalin Really Necessary? Some Problems of Political Economy, ed. by Alec Nove, pp.188-204.

2 Expectations regarding agricultural output have been more subdued and realistic under the new leadership than was characteristic of the Stalin and Khrushchev eras.
ex post results of the budgetary inflows from agricultural turnover taxes, the output plans of food processing industries and textile manufacturers, the income and expenditure balances of the population, and the numerous other plans which were linked to the above-mentioned plans. One may only speculate as to the inefficiencies that resulted from the above deviations from ex ante plans created from the impossible task of accurately forecasting agricultural production in an environment which is largely beyond the control of the central planners.

The agricultural price system and worker incentives

The reforms that have taken place in the Soviet agricultural price system and their farm incentive schemes are undoubtedly the most significant of the reforms undertaken in the agricultural sector. An examination of the trend of these reforms reveals a distinct and significant shift away from the quantitative 'command' form of allocation toward the acquisition of desired outputs through providing appropriate price incentives. It was previously noted that the agricultural price system attempted to achieve two conflicting objectives: namely, to keep the agricultural terms of trade as low as possible in order to make the peasantry bear the brunt of financing the high level of investments needed for industrialization and, simultaneously, to provide sufficient incentives for the production of necessary agricultural commodities. During the Stalinist era the price system was primarily directed toward achieving the former objective, while high levels of compulsory deliveries, reinforced by physical threats and outright con-
fiscation, were utilized to achieve the latter objective.\(^1\)

Following Stalin's death there were a series of price revisions directed towards increasing collective farm revenues and thus the value of their labour day payments. During 1953 purchase and delivery prices of grains, vegetables and potatoes were markedly increased, the most spectacular revision being an increase in the purchase price of grain of some 900 percent.\(^2\)

The incentive effects of these price revisions are indicated by the following figures: in 1952 the share of state purchases to total procurements was 6.5 percent for milk, 6.8 percent for meat and no purchases were made of other commodities; in 1953 purchases to total procurements rose to approximately 20 percent for grain and eggs, about 30 percent for meat, milk, and potatoes, and over 40 percent for vegetables.\(^3\)

\(^1\)An exception to this general principle was evident in the incentive oriented prices paid for technical crops, for example, cotton, flax and sugar beets. In 1952 government expenditures for procurements of the above crops equalled 48.7 percent of their total procurement bill for collective farms and private household plots. (Karcz and Timoshenko, "Soviet Agricultural Policy", p.135.) A partial explanation of this phenomenon is that the collective farms which grew these crops contracted to sell all their output to the government, thus leaving no marketable surplus that could be sold in the collective farm markets to supplement their incomes. Also, these crops provided the raw material base for some of the outputs of light industry, which made their adequate supply necessary. The disproportionate incentives offered for technical crops were lessened in the following years through relative increases in the price of other agricultural commodities.


\(^3\)Ibid. All of the increases in state purchases cannot be attributed to the increased price incentives. Production was relatively low in 1952 and in the process of recovering from the war. Furthermore, the compulsory delivery targets for private plots were reduced in 1953 which freed more of the output for government purchases and collective farm market sales.
By 1957 the overall price index of all government procurements equaled 266 in relation to 1952 taken as 100.\(^1\) Up to this date the price increases directly affected production incentives by creating a corresponding, though not proportional increase in labour day distributions. After 1957 the collective farms had to utilize a large portion of their increased revenues to finance their purchases of MTS equipment. The price increases that took place in 1958, 1962, and 1963 were largely absorbed toward this end. Although the burden of financing the equipment purchases reduced the net distribution of income to farm workers, this decrease was partially offset by the elimination of compulsory deliveries on private plots in 1958. Nevertheless, the net income of collective farmers was below its 1957 level for most years between 1958 and 1965\(^2\). In the latter year the government cancelled the outstanding debts owing on MTS machinery, thus eliminating this drain on gross revenues and preparing the way for farms to finance the minimum guaranteed wages that were introduced in the following year.

Although the various increases in the agricultural price level did serve to greatly improve the pre-1953 balance between compulsion and price incentives for obtaining agricultural commodities, there were serious deficiencies in the price system, specifically in the relative price structure, which created corresponding deficiencies in the structure of price incentives.

\(^{1}\text{Ibid.}\)

\(^{2}\text{Alec Nove, "Incentives for Peasants and Administrators", in Was Stalin Really Necessary? Some Problems of Soviet Political Economy", ed. by Alec Nove, p. 188.}\)
The following table indicates the magnitude of the distortions in the relative price structure in 1960, 1963 and 1965.

**TABLE XIV**

RATIOS OF AVERAGE PRICE TO AVERAGE COSTS OF SELECTED AGRICULTURAL COMMODITIES IN 1960, 1963, and 1966*

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Grain (excluding corn)</td>
<td>155</td>
<td>191</td>
<td>184</td>
</tr>
<tr>
<td>Potatoes</td>
<td>147</td>
<td>167</td>
<td>153</td>
</tr>
<tr>
<td>Sugar beets</td>
<td>164</td>
<td>161</td>
<td>140</td>
</tr>
<tr>
<td>Raw cotton</td>
<td>–</td>
<td>164</td>
<td>157</td>
</tr>
<tr>
<td>Milk</td>
<td>86</td>
<td>83</td>
<td>98</td>
</tr>
<tr>
<td>Cattle</td>
<td>65</td>
<td>81</td>
<td>109</td>
</tr>
<tr>
<td>Sheep</td>
<td>98</td>
<td>99</td>
<td>113</td>
</tr>
<tr>
<td>Pigs</td>
<td>67</td>
<td>76</td>
<td>104</td>
</tr>
<tr>
<td>Wool</td>
<td>143</td>
<td>149</td>
<td>134</td>
</tr>
<tr>
<td>Eggs</td>
<td>65</td>
<td>–</td>
<td>83</td>
</tr>
<tr>
<td>Poultry</td>
<td>–</td>
<td>–</td>
<td>118</td>
</tr>
<tr>
<td>Vegetables</td>
<td>–</td>
<td>–</td>
<td>99</td>
</tr>
</tbody>
</table>

*Adapted from the following tables: Bornstein, "Soviet Price Theory", p.240; Bornstein, "Agricultural Price and Procurement Reform", p.5; and Nove "Incentives for Peasants and Administrators", p.201. Cost calculations include material inputs, depreciation, and labour costs valued at state farm labour norms and wage rates.

The above table, even with the labour cost portion of production costs being valued at state farm rates and norms, does reflect the wide variations in profitability, and thus incentives, in the production of various crops. Supposedly the farms were to offset their losses attached to the production of milk, meat and other commodities produced at a loss, through the profits obtained from the production of grain and other profitable crops. In the case of farms where local conditions
were not favourable to the production of these profitable commodities, the incentive to produce saleable quantities over and above the minimum demanded by their quotas was minimal or often non-existent.¹ The misallocative effects of government purchase prices in determining over-quota marketable output, as well as their discriminating effect against farms that were unsuited to the production of high profit commodities, were reduced in the price revisions undertaken in mid-1970. The Council of Ministers, U.S.S.R., passed a resolution to increase the prices paid for milk, cream, cattle and wool.² At the same time bonus prices equaling 150 percent of the prices paid for quota deliveries were introduced for over-quota deliveries of livestock, poultry, milk, wool and eggs.³

Table XIV only gives an indication of the average rates of profitability for different commodities for the country as a whole, and therefore does not reflect the true variations in price incentives faced by individual collective farms. Agricultural purchase prices are zonally differentiated and are ostensibly based on the average costs of production of the respective commodities within a given price zone. In actual fact, before

¹In areas where over-quota deliveries could be disposed of in collective farm markets the farms would organize their over-quota production in such a way as to maximize their revenue, given the expected prices on collective farm markets.


³Ibid., p.2.
the 1965 price revisions, the average production costs in the highest price zones, relative to the lowest price zones, were 180 percent to 900 percent higher, depending on the crop considered, while the corresponding variation in prices ranged from 30 percent to 55 percent. The consequences of the inadequate variation in zonal prices lead to gross inequalities in inter-zone collective farm revenues and resulted in an inequitable distribution of income among collective farms, which had corresponding distortive effects on inter-zonal production incentives. On an intra-zone basis, the inclusion of wide areas of land with differing natural advantages lead to similar intra-zone income-incentive variations which were not based on inter-farm differences in productivity but which resulted from the inequitable distribution of natural advantages among farms within a given price region. The 1965 price reform increased inter-zonal price differentials, which reduced the level of inter-zonal income variations, but zonal price boundaries have remained constant and 'average costs' are still the bases of zonal prices.

The above observations on the agricultural price structure indicate that prices have largely replaced compulsion as


2Previous to 1958 the differential incomes arising from natural conditions were lessened by the MTS payments in kind which were usually extracted as a proportion of the gross harvest. After 1958 the differentiation in zonal prices was increased and the zonal price boundaries were modified slightly but these reforms were still insufficient to extract the differential land rental payments required to achieve income and incentive equities.
the instrument for effecting quota deliveries and that prices do, in some cases, provide the necessary incentives for over-quota deliveries to the government. Nevertheless, these price incentives, where they do operate, are only accidently related to local or national requirements. So long as government purchase prices are set below equilibrium levels and collective farm markets provide an outlet for over-quota outputs, it will be these free market prices, not the government purchase prices, that will determine the proportions of over-quota production of agricultural commodities.¹

The problems of inadequate price incentives discussed above were reflected in the pre-1966 system of labour remuneration that existed for collective farms. Under the labour day system of remuneration, wage payments were made from the net income in cash and kind that remained for distribution after all farm obligations had been met. The residual nature of wage payments meant that the value of labour day contributions made by individual workers were unknown to them until year-end calculations were made. Labour day credits were also subject to wide

¹The following examples indicate the discrepancy between government prices and collective farm market prices. The 1953-1954 compulsory delivery prices for potatoes was ten rubles per quintal, compared to 194 rubles in the Moscow collective farm market. The unified price was increased in 1958 to forty rubles, while the 1957 free market price was 118 rubles per quintal. The 1953-54 compulsory delivery price for milk was fifty-five rubles per quintal compared to the free market price of 394 rubles. The unified 1958 price was increased to 115 rubles per quintal while the 1957 free market price was 307 rubles. Similarly for eggs, the 1953-54 compulsory price was twenty rubles per quintal, the free market price was 239 rubles. The 1958 unified price was raised to sixty rubles, while the 1957 free market price was 226 rubles. (Spulber, The Soviet Economy, p.89, n.12.)
variations in value from year to year in that they were an ex-
aggerated reflection of the success of the harvest. If the
harvest was poor, the vast majority, if not all of the farm's
outputs, would be sold under the compulsory delivery (or quota)
obligations and would receive the correspondingly low prices
paid for these purchases. Alternatively, if the harvest was
good, amounts in excess of the required government deliveries
could be sold on the collective farm markets.\(^1\) Aside from the
incentive problems created by the generally low level of remun-
eration, the fluctuating value of the work units, and the un-
certainty of these payments until year-end distributions were
made, the method of remuneration did little to foster increased
productivity or quality of the work. Workers had little inter-
est in increasing the productivity or the quality of their
labour contributions because any increased product that resulted
from the 'extra' exertions would not accrue to them personally
but would be dissipated among all the farm members. It was for
these reasons that the household plot provided an attractive
alternative to working on the collective farm.

Private household plots occupy approximately 3-3.5 per-
cent of the sown land area of collective farms and private plots
taken together,\(^2\) yet they were responsible for the following

\(^1\) Up to 1958, premium purchase prices for above-plan
deliveries were paid by the government, which would have created
the situation described above. Between 1958 and 1964 unified
purchase prices were paid for all deliveries made to the gov-
ernment, but they were considerably below the corresponding
free market prices. Premium prices have been increasingly used
since 1965, but the amplitude of wage fluctuations has been
reduced by the guaranteed minimum wage paid for work done.

\(^2\) Gruchy, Comparative Economic Systems, p.744.
relative shares of total agricultural output in 1965.

TABLE XV

RELATIVE SHARES OF STATE FARMS, COLLECTIVE FARMS AND PRIVATE PLOTS IN THE TOTAL AGRICULTURAL OUTPUT OF SELECTED COMMODITIES IN 1965*

<table>
<thead>
<tr>
<th>Commodity</th>
<th>State Farm</th>
<th>Collective farm</th>
<th>Private plots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain</td>
<td>37</td>
<td>61</td>
<td>2</td>
</tr>
<tr>
<td>Cotton</td>
<td>20</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>Sugar beets</td>
<td>9</td>
<td>91</td>
<td>0</td>
</tr>
<tr>
<td>Potatoes</td>
<td>15</td>
<td>22</td>
<td>63</td>
</tr>
<tr>
<td>Vegetables</td>
<td>34</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>Meat</td>
<td>30</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Milk</td>
<td>26</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Eggs</td>
<td>20</td>
<td>13</td>
<td>67</td>
</tr>
<tr>
<td>Wool</td>
<td>39</td>
<td>41</td>
<td>20</td>
</tr>
</tbody>
</table>

*Source: Spulber, The Soviet Economy, p.87.

The above table indicates the massive misallocation of labour resources that occurs between the collective farm and the private plots due to the disproportionate incentives that exist for the latter alternative. Bergson states that in 1960 over 25 percent of collective farm members labour time was devoted to their private plots.¹ Despite any inequalities there may be in capital investments per hectare of land, the marginal physical product of labour in private cultivation must be very much lower than on collective farms with such disproportionate labour inputs per hectare of land being applied.² The reason

¹Bergson, The Economics of Soviet Planning, p.223.

²Nancy Nimitz estimates that in 1963 the private sector share of total agricultural labour was 42.1 percent and its productivity only 71 percent of labour in the public sector. (Nancy Nimitz, "Farm Employment in the Soviet Union 1928-1963", in Soviet and East European Agriculture, ed. by Jerry Karcz, pp.178-181.)
for such intensive cultivation of private plots is that the marginal revenue product of private plots is higher than the marginal revenue product for labour inputs to the collective farms, given the fact that all of the output from private plots may be personally consumed or sold at the high collective farm market prices.\(^1\)

The 1966 reform of the collective farm system of labour remuneration that introduced minimum guaranteed state farm wages for work done should have lessened the disproportionate incentives toward private cultivation, although production figures for 1967 do not indicate a strong trend in this direction. Relative percentage shares of private production to total production in that year equaled 39 percent for both meat and milk and 65 percent for eggs,\(^2\) which represented a drop in the relative share since 1965 of 1 percent for meat, nil for milk, and 2 percent for eggs. Additional negative evidence is provided by the continued mandatory labour requirements stipulated by the collective farms. In a sample study of collective farms undertaken in 1969, over 62 percent of the total sample had established minimum labour contributions for their male members in excess of 200 man-days.\(^3\) The continuing high levels of

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\(^1\)Once the collective farm has met its quota deliveries, the marginal gross income of above-quota production is faced with a high level of deductions before it is distributed among the members (relative to the tax levy faced by the marginal gross income of private cultivation).


outputs from private plots and mandatory labour contribution requirements would tend to indicate that private cultivation still remains attractive relative to collective farm work.

The 1966 wage reform was a major victory for the collective farm peasants. By receiving minimum monthly payments for work done, valued at state farm wage rates, the collective farm peasant will no longer have to bear the brunt of harvest fluctuations and the uncertainty over the value of his labour contributions. The high minimum wage rates should also do much to reduce the inequalities in remuneration for similar work done that existed among different farms under the 'residual' labour day system. Undoubtedly the high minimum wage rates will force many collective farms into debt as they will not be able to absorb the increased labour costs under the pre-existing zonal prices and intra-zone cost variations. It is probable that the increasing level of bank credits required by many farms to finance their mandatory labour costs will force the government to rationally their zonal price structure and zonal price boundaries.

The new incentive scheme which has been formulated for state farms that have been converted to the system of financial self-sufficiency should do much to improve their efficiency. Under the pre-reform system, prices served primarily as accounting devices and the farm manager had minor concern for costs, as his fundamental concern was to fulfill his output targets which were the main criteria by which he was evaluated. Specifically, farm managers and administrative personnel were paid bonuses for overfulfilling their output targets, with allocations for bonuses being made from over-plan profits. Therefore it was to the
manager's advantage to attempt to deflate planned outputs and to inflate planned costs as much as possible so as to achieve a low level of planned profit. By deflating the former variables, he could increase the probability of achieving his output targets, and by inflating his costs as much as possible relative to his planned outputs, he could maximize his possibility of obtaining a bonus. To a large extent these tendencies were mitigated by the superior administrative organs before they approved the production-financial plans of the individual farms. But, given the fact that his planned outputs (i.e., revenues) and costs were modified and approved, the farm manager was still encouraged toward extravagant expenditures to minimize the risk of underfulfilling his output targets, since the penalties for not meeting these targets were low relative to the bonuses awarded for overfulfilling his planned profit target.¹

The provisions of the new incentive scheme represent a significant improvement. Allocations to incentive funds for managerial personnel and workers are made from deductions

¹Before 1965 farm managers were penalized 1 percent of their basic pay for each 1 percent of underfulfillment of each of their principal output targets, to a maximum of 30 percent of basic pay. In 1965 their basic pay was guaranteed, and managerial personnel were to receive bonuses of 10 percent of their basic salary for each 1 percent of overfulfillment of their sales plan, provided that the established targets for meat and grain, or in the case of specialty farms, their principal outputs, were fulfilled. Bonuses for cost reductions are conditional on achieving the annual sales plans and cost of product targets, and are allocated to managerial personnel at rates to a ceiling of 5 percent of the over-plan profits. ("On the Salaries of Managerial Personnel and Specialists of State Farms and other State Agricultural Enterprises", Pravda, April 22, 1965. Translated in the Current Digest of the Soviet Press, Vol.XVII, No.1, 1965, p.10.)
applied against the net profit of the farm, with lower deduction norms being applied against over-plan profits. The stipulation that lower rates of incentive deductions will be applied to over-plan profits provides some encouragement to farm managers to more fully account for the productive capacity of his farm and his expected costs in determining his production and financial plans; to under or over-estimate these respective variables would decrease his potential bonus. Nevertheless, the fact that allocations to incentive funds are still applicable to over-plan profits provides an incentive to increase revenues and economize on expenditures beyond their planned levels if at all possible.

The new incentive scheme does exhibit certain weaknesses: viz., the distortions created by the 'new' price structure facing the state farms, and the relationship between the size of bonus allocations and the farms' wage funds. The farms that have been converted to the system of financial self-sufficiency are paid for their outputs at the government purchase prices paid to collective farms; thus their profitability depends on their location, on the commodities they produce, and the prices paid for these commodities in their respective price zones.

Under the new incentive scheme deductions to the material-incentive fund, which is the source of all money bonuses, are limited to a maximum equal to 12 percent of the annual wage.

\[1\] Deductions to the incentive funds for over-plan profits are calculated at 50 percent of the rates used for planned profits.
fund. Undoubtedly this provision was made to provide a ceiling on wage payments for monetary control purposes (and to mitigate excessive variations in the level of remuneration among state farms), but it may also provide an effective disincentive toward increasing efficiency on profitable farms. Once the maximum level of allocations to the material-incentive fund has been attained, the material interest of farm managers in increasing the efficiency of operations is greatly reduced.\(^1\) Alternatively, in the case of farms that can increase their material-incentive fund through increasing their profits, it is not likely that managers will over-emphasize a reduction in labour expenditures or the introduction of labour-saving techniques as a means toward this end; by reducing labour expenditures he is simultaneously reducing the base which determines the maximum deductions allowed for the payment of money bonuses.

**Evaluation of Trade**

**Evaluation of retail trade**

The objective criteria used to evaluate Soviet retail trade must take into consideration the aims or goals that the central authorities are trying to achieve through their retailing system. The crux of the Soviet macroeconomic allocation system is that the political leaders exclusively and arbitrarily decide on the basic proportions in the economy. Throughout the history of the Soviet state the party leaders have consistently

\(^1\)Their material interest is limited to bonuses in kind derived through the social-cultural and housing fund.
followed a policy of utilizing a large part of the national income for investment purposes, thereby leaving a relatively small portion of the national income for consumption purposes. The abolition of consumer sovereignty was and is an essential prerequisite for the effective implementation of an allocation policy which diverges from the preferences of consumers. The problems facing the consumer goods sector may be phrased in the following way: out of a given volume of resources that have been decided by the Party leaders, which goods must be produced, and at what prices must they be sold, in order to clear the market of all goods, recover the purchasing power made available by the state through the payment of wages and transfer payments, and optimize consumer satisfaction.

Throughout the Stalinist era the central authorities paid little attention to the above criteria in that the overriding political-economic priority was to maximize the output and growth of the heavy industry sector of the economy. The allocation of economic resources for consumption was largely viewed as a necessity to ensure the subsistence of the labour force; ideological appeals, physical coercion, and terrorist tactics were the principal methods utilized to obtain acceptable levels of productivity from the labour force and ensure the political submission of the population as a whole. During this period the central authorities deliberately fixed retail prices below market clearing levels by allowing monetary demand to exceed the supply of consumer goods at the current prices.¹ Under

¹The excessive purchasing power of the general public was kept within tolerable limits by the compulsory purchases of
these circumstances a seller's market prevailed where the scarce consumer goods were immediately purchased once they entered the retail shops, regardless of their quality or limited appropriateness. The high unsatisfied demand for virtually all consumer goods offered on the market during this period nullified, or at least concealed, any errors made in planning the assortment of goods offered for sale as well as the prices set for these goods.

During the early 1950's, and especially after the death of Stalin, the position of Soviet consumers began to change rapidly. The free medical services and low rental communal housing policies, and especially the real income policy pursued by the government, had raised the consumption level of the population well above the subsistence minimum and had increased the level of discretionary income in the hands of the population. A partial explanation of the rapid improvement in the consumption level of the populace during this period was the increasing ineffectiveness of ideological appeals in promoting motivation for the work force. The desire to increase the productivity of labour as a means for promoting economic growth had resulted in a gradual shift toward motivating the labour force by appealing to their material interests. The consequent increase in consumer selectivity as a result of their increased discretionary income resulted in market gluts of certain soft goods beginning in 1957, which were followed by market saturations of various consumer durables. The following table indicates the extent of government bonds.
the unsold quantities of soft goods.

**TABLE XVI**

RETAIL SALES AND INVENTORIES OF SOFT GOODS
FOR SELECTED YEARS, 1950 - 1966*
(in billions of rubles)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>9.5</td>
<td>18.7</td>
<td>21.8</td>
<td>23.3</td>
<td>26.0</td>
<td>28.2</td>
</tr>
<tr>
<td>Inventory</td>
<td>2.3</td>
<td>5.8</td>
<td>8.3</td>
<td>11.7</td>
<td>11.8</td>
<td>11.4</td>
</tr>
<tr>
<td>Inventory as a percent of sales</td>
<td>24.0</td>
<td>31.0</td>
<td>38.0</td>
<td>50.0</td>
<td>45.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>


The above table indicates the cumulative deficiencies that have resulted from faulty forecasting of future demand and the rigid planning system which perpetuated errors in the assortment, styling, and pricing of consumer goods.

Numerous improvements in demand forecasts have been made in recent years to supplement the relatively crude budget studies that were used to forecast demand prior to 1955. In 1957, 'new product' stores were introduced to test the market acceptability of newly created goods. Since that time Soviet planners have made increasing use of calculations of income and price elasticity coefficients which are now calculated for individual groups of commodities, as well as studies of consumer preferences and indifference analysis, in an attempt to improve demand forecasts.

During the late 1950's the central authorities began to

1Jere Felker, *Soviet Economic Controversies*, n. 6, p.135.
appreciate the fact that the lagging consumer sales were also due to the rather austere assortment and styles of goods offered and several modifications were taken to improve the flexibility of the planning system to the capricious tastes of consumers. Until 1960 the production, supply, and assortment plans for the forthcoming year had been formulated largely on the basis of the previous year's orders from the trade organizations and the expected production capacities forecasted for the forthcoming year. Changes in demand for various categories of goods, and the assortment desired within these commodity groups that had occurred in the current year, were given only very limited recognition in the production, supply and assortment plans formulated for the forthcoming year. Beginning in 1960, the detailed assortment plans for the producing enterprises were to be finalized on the basis of current orders received from the trading organizations.¹

The limited success of the above-mentioned innovations in formulating the production and assortment plans, as well as the wider use of such merchandize-moving techniques as consumer credit for durable goods in abundant supply and the wider application of informative advertizing, can be ascertained from the following table.

Table XVII shows that between 1961 and 1967 the growth in total disposable money income was 53 percent, compared with an increase of 131 percent in money held in savings accounts.²

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¹Ibid., p.146.

²The increased repressed inflation that occurred during this period is substantiated by the widening discrepancy between
Part of the rapid increase in savings can be attributed to the increasing affluence of the Soviet population, but undoubtedly the major cause for the rapid increase in their disposable income-savings ratio can be attributed to the refusal of consumers to buy unwanted or unsuitable commodities. A partial explanation for the increasing lack of conformity between goods offered for sale and the desires of the consumers can be explained by the lack of responsiveness of the producers to retail trade orders, due to their incentive system and the rigidity imposed upon the producers by the material supply system.

| TABLE XVII |
| PERSONAL DISPOSABLE MONEY INCOME AND SAVINGS ACCOUNTS, 1960 - 1967* |
| (billions of rubles) |
| Total disposable money income | 87.8 | 95.0 | 98.8 | 104.4 | 116.5 | 125.7 | 134.0 |
| Total savings in accounts | 11.7 | 12.7 | 14.0 | 15.7 | 18.7 | 22.9 | 27.0 |
| Percentage of additional income saved | 9.3 | 14.0 | 34.4 | 30.4 | 24.7 | 45.7 | 49.4 |

*Source: Keizer, The Soviet Quest, p.81.

Previous to 1967, when the new incentive system was introduced into light industry, the key indices by which producing enterprises were evaluated was their gross value of output and cost reduction targets. Prior to 1958 the gross value of output target was given paramount importance. Under both state retail prices and collective farm prices at this time; see Table XI, p.96.
situations the producer had an incentive to distort his assigned assortments in such a way as to maximize the fulfillment of his assigned targets. Thus goods were frequently produced which maximized the fulfillment of the targeted indices of the producer but which did not conform to the assortments or quality desired by the consumer. The implementation of the 1965 reforms, which based performance incentives on the value of goods sold and profitability indices, should go far in increasing the responsiveness of producers to the manifested desires of the consumers (as expressed through the orders from the retail trade organizations), providing the trade organizations exercise their rights of rejecting unsuitable goods. The central problem left untouched by the 1965 reforms is the rigidity imposed on the producer through his material supply allocations. The producing enterprises receive allocations of materials in accordance with their approved supply plan which has been formulated on the basis of their individual input coefficients and gross assortments assigned; the producing enterprise can therefore only fulfill the detailed assortment orders within the limits allowed by their pre-assigned material allocations.

Matching the assortment and quality of consumer goods offered with the demands and expectations of the populace is of crucial importance for the economy as a whole. The distinct shift towards an incentive policy of material interest as the primary method utilized to encourage higher productivity on the part of the labour force will be ineffective if the extra real income cannot purchase desired consumer commodities. Aside from the incentive problem, planned retail sales must be achieved in
order to attain financial equilibrium. The primary source of investment funds are revenues from enterprise profits and turnover taxes, and these revenues are in fact only realized on the completion of sales. The problem of the rigidity of the material supply system in reducing the response of producers to consumer demands is insolvable under the present allocation mechanics operative in the Soviet economy. The administrative allocation of many material supplies will continue to be a reality as long as the desires of the Party leadership diverge from consumer preferences regarding the allocation of the nation's resources between investment and consumption.

Evaluation of foreign trade

Any economy which utilizes quantitative planning and administrative allocation of materials and equipment as their primary methods of allocating domestic resources among alternative uses cannot permit external economic forces to influence the composition and distribution of their resources, except in a controlled manner. The monopolization of foreign trade by the government is absolutely essential under the mechanics of allocation presently utilized in the Soviet Union; uncontrolled foreign trade is diametrically opposed to the concept of centralized resource allocation. By restricting foreign trade activities to a relatively few organizations, and by incorporating foreign trade planning in the national economic plans, the central authorities can successfully isolate the domestic economy from the external world and utilize trade flows to help implement the desired pattern of resource utilization.
The lack of a rational price system, based on relative scarcity ratios, makes calculations of comparative costs an unsuitable criteria to use as a basis of trade. This deficiency in the internal price structure is well recognized by the central planners, and since relative prices are not indicative of relative utilities, they use subjective, unquantifiable estimates of relative utilities as a basis for trade. Obviously the subjective estimation of values does result in sub-optimal utilization of resources, as it does in the case of resources produced and consumed internally, but this becomes an unavoidable result when quantitative planning is utilized as the principal method of allocation in the economy.

The methodological practices used in formulating the foreign trade plan are weak in several respects, which increase the difficulty of achieving consistent national economic plans. The financial equivalent of the export plan is derived before the actual sales are negotiated and therefore has to be based on estimates of the prices that can be obtained from export sales. Planned export revenues then provide the financial constraint on the volume of planned imports. In the case where export revenues are below the planned level it necessitates many ad hoc changes to the annual plan. In some cases exports may be increased, but the more frequent result of underplan revenues is to reduce the level of imports planned.\(^1\) Since these imports

\(^1\)Trade credits may be extended to cover unplanned imbalances, especially in intra-bloc trade, but with the non-convertibility of the ruble, the trade with convertible currency areas often has to be reduced if the level of appropriate foreign exchange is below what was planned.
were to be utilized as factor inputs in the supply plan, the reduction in imports planned will have various effects on overall plan fulfillment, depending on which stage of the production process the now non-existent imports were to be utilized.

Further inconsistencies in the national economic plan result from changes made to planned exports. The foreign trade plan is ratified before the sales of the export commodities are negotiated. Previous to this time, enterprises producing export goods have been assigned output and assortment plans, and have ordered the necessary materials to fulfill these plans. During the sale negotiations the purchasers often stipulate different assortments and/or specifications than were anticipated in the export plan. Therefore the trade organizations have the authority to change the quantity, and specifications of the export orders at the enterprise level. Unfortunately, the corresponding authority to change input allocations does not rest with the trade associations and necessary input changes are frequently not made. Thus the consequences of inconsistent enterprise plans result in the inability of the enterprise to meet its new export plans or, in the case of cancelled orders, the accumulation of unnecessary inventories. It is likely that the problems associated with inconsistent plans will increase over time as the changes required in export production plans are a function of the complexity of the exports. The recent trend and expressed objective of Soviet export policy is to increase the proportion of manufactured goods relative to total export volume.

The non-convertibility of the ruble necessitated planning the trade flows with most of its trading partners, with
the exception of countries having convertible currencies, so as to achieve an equilibrium balance of payments between each country. Bilateral balancing of trade has the advantage of ensuring a balance of payments with trading partners but limits the trade between countries to the level of whatever imports or exports are desired, i.e., although the Soviet Union may desire to import large quantities of commodities from another country, the value of the imports is limited to the value of exports acceptable to that country and the converse. The creation of the International Bank for Economic Cooperation was an attempt to overcome the inherent restrictiveness of balanced bilateral trade, at least with trade among Eastern-bloc nations.

The new system of financial settlements was a definite improvement over the old system of bilateral balancing and swing credits previously used in intra-bloc trade. Most of the serious deficiencies of the old system, namely those involving the high level of credit needed and the low velocity of trade funds, were overcome. However, the principal deficiency of the old system, the lack of multilateral trade settlements, was only rectified to a limited degree.

All trade flows in the Eastern-bloc countries are planned, and the difficulties of planned multilateral trade are

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1 An overall balance of trade with convertible currency countries was necessary, but a surplus trade balance with Britain could be used to equalize a deficit balance with Canada and so on.

2 Re-exporting unwanted imports is also a possible means of achieving a balance of trade. Thus the Soviets re-export, for example, Chinese tin and Egyptian cotton, to allow these countries to finance their imports from the Soviet Union. (Alec Nove and Desmond Donelly, Trade With Communist Countries, p. 34.)
considerable. A hypothetical example will elucidate the difficulties.\(^1\) Suppose country A trades with countries B, C and D. A runs a surplus with B. This means that A(B) go into negotiations with C and D and require a net deficit (surplus) equal to the surplus (deficit) with A(B). There is no particular reason why C and D should want to run a combined net deficit with A exactly sufficient to offset A's surplus with B. Members will be loathe to accept a surplus (deficit) with another member because of the subsequent difficulty of buying (selling) more than can be sold to (bought from) other countries.

The actual trading procedures followed by the Soviet Union and all other member countries of the IBEC have been to enter into bilateral negotiations with each of the member countries. On the completion of these negotiations general negotiations are held where members try to offset surpluses or deficits with each other by taking into account credits and debits with other countries. These same procedures were possible before the creation of the IBEC and were undertaken, although on a smaller scale.

The above examination shows that the greatest technical problems of Soviet trade are the lack of a rational internal price system and the inconvertibility of their domestic currency. The former problems eliminates the possibility of rational calculation of the benefits of trade while the latter problem necessitates the bilateral balancing of a large proportion of

\(^1\)The example given closely follows that given by Frank Holzman in "Foreign Trade Behaviour in Centrally Planned Economies", in Industrialization in Two Systems, ed. by Henry Rosovsky, p.249.
trade flows. These problems as well as the diseconomies associated with inconsistent foreign trade plans all arise out of the inflexibility inherent in the Soviet form of allocation.

**Conclusion: the Problem of Central Planning and the Market in Russia**

The rationale that lies behind the form of allocation utilized in the Soviet economy is that the social, political and economic goals of the Communist Party differ from those of the populace. The overall objectives of the state, and the demands that these objectives make on the nation's resources, exceed the level that would voluntarily be placed in the hands of the state by the populace. Hence the political regime has constructed an allocation mechanism that is primarily directed towards satisfying the objectives of the state. The resulting allocation mechanism of quantitative planning and administrative allocation has facilitated state control over the disposal of the nation's resources to satisfy its own gross demand for resources, as well as permitting these resources to be utilized in the expressed assortment of goods and services desired by the state.

The preceding examination of the reforms undertaken in industry, agriculture, and trade indicate that the allocative mechanics presently utilized in the Soviet economy are essentially the same as those used throughout the Stalinist era. The essence of Soviet allocation has remained in the realm of quantitative planning. Economic resources are allocated and distributed by means of an imperative national economic plan;
administrative methods are still the overwhelmingly predominant force in the direction and control of the nation's economic processes.

The successive reforms and modifications made to the economic system, prior to 1965, centered on reorganizations of the economic-administrative bureaucracy. Repeated attempts were made to correct the manifested deficiencies of the allocation system within the framework of the pre-existing planning methods and did not in fact present the adoption of real alternatives, perhaps with the qualified exception of agriculture.

Since the death of Stalin, successive increases in agricultural purchase prices, and modifications of the relative prices of agricultural commodities have been made in attempts to more closely align the production-price incentives offered with the quantitative demands of the government, viz., agricultural outputs. Target delivery quotas for the principal agricultural commodities are still assigned to enforce the desired production of agricultural crops, and will continue to be until such time as the state purchase prices are sufficient to induce the necessary 'free' deliveries of agricultural outputs to satisfy the demands of the populace.¹

Many deficiencies in Soviet allocation that have resulted in creating sub-optimal use of resources have been

¹There is little likelihood of the central government switching from quasi-compulsory deliveries to price incentives in the near future. The turnover taxes applied to agricultural products sold through the state retail outlets provide a significant proportion of budgetary revenues. To rely on price incentives the government would be required to substantially increase their purchase prices.
pointed out in the above examination of the Soviet economic system. A number of these inefficiencies have been partially (and in some cases substantially) reduced by the modifications made to the allocation system in the past two decades. Some other remaining inefficiencies, for example the coherent specification of output plans, insufficient specialization of production, and production shutdowns due to the late arrival of input supplies may possibly be reduced in the future by improved data processing techniques and by converting to wholesale trade in producer goods.¹

The 1965 reforms significantly reduced the relative scope of the centralized directives in guiding resource allocation by substituting 'economic levers', i.e., profits, capital charges, and incentive funds to help regulate and control the economy. Nevertheless, the dominance of centralized directives was not diminished; the role of the 'economic levers' was to promote adherence to the physical (and financial) variables targeted by the central authorities. The increased reliance on 'economic levers' was the last of the many modifications that have been made in the Soviet guidance system in an attempt to obtain rationality at the microeconomic level. The pre-reform guidance system had relied overwhelmingly on administrative controls and centrally established input and output norms in an

¹Kosygin has announced the central government's intentions to convert to wholesale trade in producer goods. (Kosygin, Directives of the Five-Year Economic Development Plan of the U.S.S.R. for 1971-1975, p.59.) Formal approval by superior administrative authorities was required for over 99 percent of the wholesale trade in producer goods carried out in late 1969. (Schroeder, "Soviet Economic Reform at an Impasse", pp.39-40.
attempt to obtain the elusive goal of efficiency at the micro-economic level. The resulting vast array of physical and financial targets stifled initiative at the enterprise level. The lack of coherency in the targeted directives, as well as in the incentive scheme used to encourage the fulfillment of these targets, did not stimulate the efficient carrying out of the objectives of the national plan. Innovation was stifled, specialization was insufficient, and production was directed toward fulfilling the principal incentive-related plan targets, regardless of the 'economic costs' involved.

The modifications made to the implementation of the annual plans, through utilizing the 'economic levers' noted above, were an attempt to induce an 'automatic' response toward greater efficiency at the enterprise level by relating enterprise bonus schemes to their profits. The use of the 'economic levers' has created a corresponding increase in the directive role of industrial wholesale prices at the micro level to effect the preferences of the central authorities. Consequently, industrial wholesale prices have been manipulated to encourage various diverse objectives: some prices are varied to encourage the substitution of scarce inputs, others are varied to stimulate improvement of product quality, induce the implementation of new technology, or the introduction of new products. In essence, the objectives of the 'economic levers' is to duplicate, in selected spheres of action, the autonomous, rational decision making that is characteristic of competitive market economies. The success of the 'economic levers' in stimulating efficiency, while simultaneously encouraging the fulfillment of
the objectives of the economic plan, has been less than complete. Since the onset of the new microeconomic guidance system, the number of items in the assortment plans has displayed a tendency to increase. Reinforcing this indication of a lack of coherency in the microeconomic guidance system is the fact that the number of persons employed in state administration has increased 38 percent between 1964 and 1970.

The above-noted tendencies toward increasing the level of administrative guidance manifests the central problem inherent in the Soviet form of allocation, the lack of an economically substantiated criterion of value which would allow decentralized, autonomous decision making, directed toward fulfilling the expectations of the Party leadership. The lack of coherency in the Soviet price system, and the fact that prices do not attempt to indicate scarcity-utility ratios has two negative consequences: 1) the lack of an economically substantiated criterion of value eliminates the possibility of making optimum choices to achieve defined ends, i.e., rational substitution is impossible; 2) it necessitates preponderant administrative guidance to direct productive activities. If the central plans are to possess any degree of economic rationality, they must be constructed with the aid of scarcity prices, based upon planner preferences. The task of constructing such a price system without the aid of a competitive market has proven to be impossible.

1Michael Ellman, Economic Reform in the Soviet Union, p.305. A part of the increase in assortment targets can be attributed to the increasing complexity of production mixes.

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APPENDIX I

OUTLINE OF THE SCHEDULES FOR PREPARING ANNUAL PLANS AND BUDGETS*

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KEY

1. Preliminary drafts of "material balances" for critical commodities, summary national-income type balances (not including the consolidated financial plan), and "control figures."

2. Preliminary targets and limits for output and consumption of critical commodities, capital investment, labor productivity, cost reduction, etc.

3. Drafts of economic plans in expanded form. Copies are also sent to the Council of Ministers U.S.S.R. (not shown).


5. Preliminary drafts of summary financial plans of economic agencies and estimates (i.e., agency budgets) of budget-supported agencies.


8. Dissemination of targets and limits in the draft national economic plan. Initial, intermediate, and terminating dates are obscure, and probably vary for different types of indicators. Not shown is an upward flow of detailed specifications for allocated materials and products from consumers up to planning or "plan-realization" agencies (e.g., soyuz-glavki of Sovnarkhoz U.S.S.R.) and subsequent downward flow of production and delivery authorization in final detail.

9. Dissemination of budgets, financial plans, and estimates through the network of finance organs. The timing of this flow is obscure. Approved summary budgets and plans returning from the superior level are timed to meet preliminary and summary drafts coming up from the inferior level. Financial plans and estimates are approved at each level after receipt of approved budgets from above.

10. Ratified budgets.

11. Ratified national economic plans.
12. Detailed "technical-production-financial plans," or their equivalent, drawn up and ratified at the enterprise level. Reference copies are sent up to the next administrative level for control purposes (not shown).