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## ACCOUNTING FOR COST CONTROL IN THE SOVIET ECONOMY

Robert W. Campbell\*

THE growing complexity of managerial structures in the modern economy requires an increasing reliance on accounting as a tool of management. Effective management in such bureaucratic structures is achieved only by allocating responsibility unambiguously and then applying sanctions and conferring rewards in close accordance with the execution of responsibility. The effectiveness of control depends in large part on detailed reporting concerning the fulfillment of responsibility, and the crucial role of accounting in this process is determined by the simple circumstance that responsibility is often specified in terms of accounting magnitudes.

In the Soviet Union, the consolidation of the entire economy under the direction of the state has confronted the Soviet economic administrators with the general problem of control in an acute form, and they have been strongly conscious of the necessity to strengthen accounting as one of the instruments of control. In particular they have placed great emphasis on cost performance as a general index of operating efficiency, and have elaborated a comprehensive system of cost accounting and reporting as an aid in controlling the manager-bureaucrats of their economic system. The purpose of the present article is to describe some of the problems of cost accounting in the setting of the Soviet economy and to make some evaluation of the effectiveness of Soviet cost accounting as an instrument of control.1

Accounting supplies merely an *ex-post* record, and so cannot *per se* control anything. What it does, however, is to furnish information on performance so that performance can be checked

\*This article is based on a portion of my doctoral dissertation, "Soviet Cost Accounting; Rules and Techniques" (Harvard University, 1955). I am pleased to acknowledge my indebtedness to the Russian Research Center of Harvard University for its support of this study, and to Professor Alexander Gerschenkron, who originally suggested Soviet accounting as a field of research.

<sup>1</sup> No attempt will be made in this article to evaluate Soviet cost accounting in relation to its influence on the price system. This is clearly an important problem, but distinct from the one discussed here.

against standards and appropriate action taken. Because of the oblique nature of this process its effectiveness depends on two important conditions. (1) There must be accurate and detailed standards against which performance can be measured. These standards must be objective, for if they are not, failure to comply with them means nothing; and they must be very detailed, so that over-all variances can be traced to the exact places where they arise. (2) The ex-post reports on performance must be truthful and accurate. This is an especially important problem in the Soviet Union, where there exist strong incentives to falsify cost reports. It is against the background of these prerequisites that we will discuss the effectiveness of Soviet accounting for cost control purposes.

In the Soviet system the primary motivation of management at the level of the enterprise is to fulfill the assigned plan rather than to earn the greatest possible profit. For this reason management at the lower level has little incentive to minimize costs except to the extent that cost goals are embodied in the assigned plan, so the responsibility for controlling costs lies ultimately with the higher organs of administration such as the ministry or the glavk.2 It will be useful, therefore, to discuss separately two levels of cost control in the Soviet system: (1) the level at which the superior organ sets and enforces cost goals for the enterprise, and (2) the level at which the enterprise management uses internal cost controls to meet the assigned cost goals.

I

The instrument used by the glavk to control costs in its subordinate enterprises is a set of cost plans similar to the budgets of American cost accounting. On the basis of planned prices and the input ratios underlying the plan, cost

<sup>2</sup> "Glavk" is the Soviet abbreviation for glavno upravlenie (chief administration), an intermediate link in the administrative hierarchy.

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goals are set out both for finished output in general and for the most important kinds of output.3 These cost indicators are taken as the principal measure of the efficiency of operation of the enterprise. As one author says, "The cost of production is the basic synthetic indicator characterizing the quality of the entire work of the enterprise." 4 In one sense these cost goals are redundant, since they are only a recapitulation in value terms of many other goals in physical terms assigned to the enterprise. But the use of cost accounting permits the multitude of partial indexes of operating efficiency to be summarized in an over-all index, and yet permits the inclusion of whatever detail is necessary for analysis. If the cost goals are met, the glavk can give premia to enterprise management for their fulfillment; if they are not, it uses the cost breakdowns to analyze the reason for the failure, and then attempts to tell the manager what corrective action he should take.

Deficiencies in cost planning. Obviously the effectiveness of this kind of control depends on the quality of the cost plans. If the cost goals which the enterprise director has to meet in order to receive his premia contain considerable reserves, then not enough pressure is being applied, or if the managers are deprived of premia for failing to meet impossible goals, incentives are impaired.

Traditionally the glavk has been in a very poor position to work out and assign technologically objective cost plans. The glavk has neither the staff nor the mass of detailed information which is required to work out a cost plan by a process of aggregating technological norms for all the processes involved in a given output program in individual plants. The establishment and use of such detailed standards is closely tied up with the day-to-day work of management and is therefore the responsibility of the enterprise rather than of the glavk. As might be expected in this situation, the job of working out the detailed cost plan has always been left to the planning section within the enterprise. The higher organs have controlled the cost planning only indirectly through the setting of certain "limits and directives" which the enterprise planners must incorporate in the final plan. These goals specify the cost plan implicitly, and so if the glavk were in a position to set these summary determinants of the cost plan on an objective technological basis, then the enterprise would be forced to draw up an objective cost plan. But lacking the staff and the detailed information required to work out such technologically founded limits and directives, the glavk has usually relied on the record of past performance in setting the directives and limits. As Soviet writers are fond of pointing out, this in effect "legalizes" poor work on the part of the enterprise and does not permit the cost plan to be a directive for reducing the cost of production.

Beginning with the 1947 Plan, however, a full-fledged official campaign was begun to improve the cost planning and to base the cost plans more on technological standards and less on the standards of past performance. The Council of Ministers set a number of norms which were to be met or bettered in the plans of individual enterprises; 5 the ministries were instructed to work out aggregate "average-progressive" 6 norms for labor consumption, materials consumption, and equipment utilization; the State Supply Administration (Gossnab) set up a large number of norms for materials consumption for individual kinds of products and used these norms in making its allocations of scarce materials. These measures were supplemented by including in the annual national economic plans a general norm of cost reduction for industry as a whole which is differentiated and passed down to each individual enterprise in the economy. It appears that as a result of this campaign a great deal has been done to develop norms based on technological calculations rather than on the results of past performance, and to encourage cost improvements by applying general pressure from above in the form of a cost-reduction assignment. On the other hand it is also clear that the basic problem of the glavk, namely the inadequacy of the means at its disposal for determining objective

<sup>&</sup>lt;sup>8</sup> A good description of these cost plans and the cost reports may be found in S. A. Shchenkov, *Otchetnost' promyshlennogo predpriiatiia* (Moscow, 1952), ch. 3.

<sup>&</sup>lt;sup>4</sup> P. A. Khromov, A. A. Arakelian, and A. V. Vorob'eva, Ekonomika promyshlennosti SSSR (Moscow, 1956), 409.

<sup>&</sup>lt;sup>5</sup> Pravda, March 1, 1947.

<sup>&</sup>lt;sup>6</sup> "Average-progressive" norms are norms set on the basis of the average performance of the best workers, shops, etc. engaged in any activity.

cost plans, has not been solved. This problem is inherent in the Soviet system and cannot be overcome solely by decrees and campaigns.

Accuracy of reported costs. The second pillar on which the effectiveness of cost control rests is accuracy in the reporting of costs. One of the constant refrains of the literature is that the cost reports are drawn up inaccurately. There are distortions caused by the generally low quality of Soviet accounting and by outright falsification. A single example will suffice to illustrate the kind of distortion that is caused by the low quality of accounting, and we will then go on to discuss in more detail the kind of bookkeeping falsifications which the Soviet enterprise is likely to engage in. These falsifications are extremely interesting not only in relation to the effectiveness of cost control, but also for the insight they provide regarding the kinds of pressures that are felt by the enterprise manager.

An illustration of the limitations which inaccuracies of accounting place on cost control in the Soviet economy is found in the widespread use of a practice called "simplified standard cost," or sometimes, very aptly, the "kettle method" of cost accounting. The actual forms which this method takes are diverse, but in essence it operates as follows. During the month, outlays are accumulated in plant-wide expense categories such as materials, wages, plant expenses, shop expenses, and so on. At the end of the month the cost of each kind of output is computed, by element of expense, according to the norms of the cost plan, and the corresponding amounts are written off the plant-wide expense accounts. The variance left in the expense accounts after this distribution is then assigned to the different outputs in proportion to the amounts determined by the planned norms. In other words, there is not any real ex-post accounting at all. Such practices deprive the cost reports of much of their usefulness for analysis because it is impossible to tell where overexpenditures have occurred. If the analyst asks why the wages fund was overexpended, he finds that the planned amount of wages was exceeded by exactly the same percentage for every product! And so on through all the items of the cost accounting classification. It is possible to see whether the total cost plan was overexpended and what outlay items were overexpended, but the analyst is deprived of any possibility of finding out where these overexpenditures took place. Although the practice is often condemned, it appears to be fairly common.<sup>7</sup> It is a boon to the overworked bookkeeping staff, and since the superior organ is more likely to judge their work on the basis of speed rather than quality, there is great pressure to use it. This form of cost accounting is at its worst when, as often happens, the original cost plan is determined more or less arbitrarily.<sup>8</sup>

In addition to such more or less innocent errors engendered by the primitive technology of Soviet accounting, there is undoubtedly a great deal of outright falsification of cost reports. Under double-entry bookkeeping there are important limitations to the kinds of falsification that are possible. The cost reports of a Soviet enterprise are an integral part of its general accounting statement and must be reconcilable with such documents as the balance sheet and the profit and loss account. Nevertheless, there are some fairly easy ways of falsifying the cost reports, and under pressure to meet a cost goal the enterprise sometimes resorts to falsification.

The most important cost goal, the one which must be fulfilled in order to receive premia, is the cost-reduction assignment. This goal covers the part of finished production which is "comparable," i.e. the kinds of output which have been produced in previous years. Therefore, if outlays can be written off to any accounts other than this one, the cost report will be improved where it counts the most. There are, for instance, some accounts which are relatively difficult to inventory *in natura*, and so the Soviet plant managers are tempted to conceal part of

<sup>7</sup> P. I. Zlobin, Bukhgalterskii uchet, otchetnost' i analiz deiatel'nosti stroitel'nykh organizatsii (Moscow, 1950), 109; A. A. Afanas'ev, Osnovy postroeniia bukhgalterskogo balansa, 3rd ed. (Moscow, 1952), 24; N. N. Ivanov, "O metodike proizvodstvennogo ucheta i o kontrole za zatratam na proizvodstvo," Bukhgalterskii Uchet (1953:6), 21. According to M. Kh. Zhebrak, Kurs promyshlennogo ucheta (Moscow, 1950), 312, it is used in the furniture industry, the shoe industry, the leather industry, and a number of other branches. This method is obligatory for all enterprises of regional, city, and oblast jurisdiction, and for industrial co-operatives. V. A. Goloshchapov, Bukhgalterskii uchet (Moscow, 1950), 71. 03.

71, 93.

8 "Novaia instruktsiia po uchetu sebestoimosti produktsii," Vestnik Statistiki, III (1953), 89, and D. Vainshenker, "Voprosy analiza sebestoimosti promyshlennoi produktsii," Vestnik Statistiki (1954:1), 42.

the costs which are actually chargeable to the current period by inflating these sections of the balance sheet. The most important such account is Unfinished Production. Time and again there occur in the literature descriptions of instances in which the enterprise neglects to write off from unfinished production outlays properly chargeable to current output or to the Profit and Loss account.9 These include wastage, cancelled orders, shortages of materials, and unfinished production and depreciation of tools and other small-value assets. The accounting authorities have tried to control this by a precise definition of what kind of outlays can be included in unfinished production, and to what extent. Before 1940 this was left up to the discretion of the plant itself, but this left open too many possibilities of falsification, and since 1940 the Ministry of Finance has issued a series of successively more restrictive rules which leave the enterprise virtually no discretion in valuing unfinished production. These rules have probably made it more difficult to understate costs by inflating unfinished production, but there continue to be complaints that enterprises conceal expenses in this account.10

Two other accounts to which expense can be incorrectly assigned are Development Expense and Mining-preparatory Expense. These expenses make up a fairly important part of costs in some branches. Sometimes these outlays are financed out of the budget, and in that case expense can thus be not only diverted from the cost of production in the current month, but written off completely. It is virtually impossible to inventory these accounts since they consist almost exclusively of intangibles. Moreover, it is often not feasible to establish a fixed budget

° See for instance A. Margulis, Voprosy ucheta i otchetnosti (Moscow, 1944), 27-31. A 1938 source describes a case in which an audit showed that the plant had 3.5 million rubles of undisclosed losses in its unfinished production account. Mashinostroenie, October 2, 1938. A large number of such cases are discussed in an article in Bukhgalterskii Uchet (1947:2). One of these concerns a machine-building enterprise in which the costs of operating a subsidiary mine had been left in the unfinished production account until they finally reached 570 million rubles. There are also a large number of examples given in L. Semenov, "Kak dolzhno uchityvat'sia i otsenivat'sia nezavershennoe proizvodstvo promyshlennogo predpriiatiia," Den'gi i Kredit (1941:5-6), 44-49.

<sup>10</sup>See for instance "Provysit' kachestvo ucheta proizvodstva i kal'kulirovaniia sebestoimosti produktsii, *Bukhgalterskii Uchet* (1952:3), 5.

for development expense because it is very difficult to predict in advance just what amount of financing will be necessary. These two circumstances have permitted Soviet enterprises to write off to these accounts many expenditures which should have been assigned elsewhere. Development expense, in particular, has been inflated by the costs of whole laboratories, capital investment, the purchase of experimental machines, and cost of production of the regular output of the enterprise among other things. When development work is carried out in part by the regular production shops it is relatively easy to write off an excessively large share of their outlays to this account.

Not only is there a temptation to assign unwarranted expense to the development accounts, but also a temptation to write it off subsequently to the cost of production at too slow a rate. Because these accounts are often kept only in very gross terms, with very little detailed indication of the nature of the expense or the kinds of product or series for which outlays have been made, the enterprise can charge such expense to the cost of production in a fairly arbitrary way. One writer cites as "characteristic examples" instances in which mining enterprises arbitrarily understated their costs by failing to write off the appropriate amount of expense.12 Another source describes the situation in the Stalin diesel plant in Voronezh. Here all expenses of developing new products were kept in a single account without any indication of the particular series or orders involved. The development expense account grew and grew, until at last it reached 1.5 million rubles, at which time the glavk investigated. After reviewing the accounts, the glavk decided that 900 thousand rubles of this amount should have been charged to production of earlier years, and ordered that it be written off as a loss.13

<sup>11</sup> S. Mekhanik, "Finansirovanie raskhodov budushchikh let," Sovetskie Finansy (1943:10-11), 20. N. N. Ivanov and V. I. Pereslegin, "Ob uluchshenii planirovaniia, ucheta i kal'kuliasii sebestoimosti produktsii," Bukhgalterskii Uchet (1953:11), 19.

<sup>12</sup> Mekhanik, op. cit., 17. The books on "cost analysis" also hint that this account is likely to be inflated, and that the rate at which the enterprise writes it off must be checked very carefully. I. I. Poklad, Analiz sebestoimosti produktsii i finansov na mashinostroitel'nom zavode (Moscow, 1953),

<sup>&</sup>lt;sup>18</sup> Mashinostroenie, October 2, 1938.

In 1940 for the first time the Commissariat of Finance tried to deal with the problem by laying down in detail the kind of expense chargeable to development expense, but left to the individual branches the task of establishing write-off periods. After the war, when the Ministry of Finance made a special investigation of cost accounting practices in Soviet enterprises, it was found that the handling of this expense was still unsatisfactory, especially in machine-building plants. As a result of this investigation the Ministry of Finance ordered that the accounting for development expense be made more exact. and definite limits were set for the length of the write-off period. The rules were made even more restrictive in 1952.

Capital Repair and Capital Construction are other accounts to which expense can be shifted.14 Any expense shifted to these accounts will not appear in the cost of finished production. (1) Capital repair is charged to the Amortization Fund rather than to the cost of production, and since the Amortization Fund is formed by an invariable amortization charge, such a shift decreases the reported cost of finished production. The shift can be made by charging excessive overhead to capital repair or by accounting for current repair as capital repair. <sup>15</sup> An attempt has been made to prevent this distortion by setting up detailed lists in each ministry of what kinds of repair fall into the capital repair category and by setting limits on the amount of overhead that can be charged to capital repair in the form of a percentage of the wage cost of repair.<sup>16</sup> (2) If the enterprise is making capital investments, it may be possible to capitalize current costs by charging capital construction high prices for services and materials or by using the assets of the construction section for the purpose of the main activity.<sup>17</sup>

Another serious form of distortion is that in which shortages and inventory losses are omitted from the reported costs. Soviet accounting has traditionally emphasized the annual inventory, so that monthly and quarterly cost reports often do not take account of inventory shortages. There are frequent descriptions of cases where an enterprise has reported costs within the limits of the cost plan all during the year, but in the annual report, based on an inventory, has had to report failure to meet the cost plan.18 The divergence between materials consumption as shown in the documents and as shown by the inventory is likely to be unusually large in the Soviet economy because of poor warehouse management under which materials are often issued without weighing or measuring and the documents filled in by guess.<sup>19</sup> Furthermore, poor bookkeeping control invites extensive pilfering which causes material shortages that show up only when an inventory is taken.20 An attempt has been made to control this sort of falsification by requiring more frequent inventories. Presumably the more frequent inventory will help to improve the cost accounting, but one wonders whether the monthly and quarterly inventories will actually be made. There are complaints that these intermediate inventories are likely to be mere formalities carried out by the lower level personnel without participation of the bookkeeping department.21

Auditing. It is obvious from the foregoing

<sup>&</sup>lt;sup>14</sup> It should be mentioned that these expense shifts often take place in the reverse direction. The minimizing of costs is only one of the goals of management, and there are often instances in which other motives conflict with the aim of meeting a cost goal. Outlays on capital repair and capital construction are often charged to the cost of current output, because the other source of funds for repair and investment are so restrictive. G. Etchin, "Likvidirovat' otvlechenie oborotnykh sredstv na kapital'noe stroitel'stvo i kapital'nyi remont," Finansy i Kredit SSSR (1953:3); and L. Eliashov, "Rezul'taty beskontrol'nosti," Sovetskie Finansy (1947:9), 30.

<sup>&</sup>lt;sup>15</sup> Afanas'ev, op. cit., 47; P. A. Khromov, Amortizatsiia v promyshlennosti SSSR (Moscow, 1939), 60.

<sup>&</sup>lt;sup>16</sup> S. Meshal'kin, Finansirovanie kapital'nogo remonta osnovnykh sredstv (Moscow, 1949), 8-9.

<sup>&</sup>lt;sup>17</sup> Afanas'ev, op. cit., 47; Bukhgalterskii Uchet (1947:5),

<sup>&</sup>lt;sup>18</sup> For some examples, see the following. N. Ivanov, "Uluchshit' uchet sebestoimosti promyshlennoi produktsii," Bukhgalterskii Uchet (1947:9), 10; G. G. Bocharov, Normativnyi uchet v mashinostroenii (Moscow, 1949), 105; "Povysit' otvetstvennost' za kachestvo ucheta i balansa," Bukhgalterskii Uchet (1947:5), 2; F. Semochkin, "K rassmotreniiu godovykh otchetvo za 1946 g.," Bukhgalterskii Uchet (1947:2), 46.

<sup>2), 46.

&</sup>lt;sup>19</sup> G. G. Bocharov, "Osnovy kal'kuliatsii v mashinostroenii," *Bukhgalterskii Uchet* (1952:6), 44.

<sup>&</sup>lt;sup>20</sup> Some examples are given in Bukhgalterskii Uchet (1947:9), 5-6; "Povysit' kachestvo dokumental'nykh revizii," Bukhgalterskii Uchet (1954:4), 1-4; S. S. Ostroumov, Osnovy bukhgalterskogo ucheta i sudebno-bukhgalterskoi ekspertizy (Moscow, 1953), 141.

<sup>&</sup>lt;sup>21</sup> S. S. Geidish, Tret'ia vsesoiuznaia konferentsiia po vnutrizavodskomu planirovaniiu v mashinostroenii (Moscow, 1949), 53.

that auditing has an important role to play in the Soviet system of control. The distortions described could easily be exposed and prevented if the books and reports were checked by trained auditors. For this reason we cannot conclude our discussion of the accuracy of Soviet bookkeeping reports without saying something about Soviet auditing practices. In accordance with the multiplicity of control organs characteristic of Soviet administration, there are several separate auditing staffs which have the right to check the bookkeeping of the Soviet enterprise, and every enterprise is supposed to have its accounts audited at least once a year.22 There are three principal reasons, however, why this auditing program is not fully effective.

(1) The goal of an annual audit for every enterprise is apparently never fully achieved. Many enterprises go unaudited for several years at a time, and it is said that in these unaudited enterprises fraud occurs frequently. (2) The audits are poorly performed. Auditors are poorly trained, underpaid, overworked, and spend a good deal of time writing reports and documenting trivialities, but are unable to do much by way of revealing the weaknesses of accounting arrangements in individual enterprises. (3) As a general rule the auditors are concerned with what an American accountant would call "internal audit." They are looking for fraud, theft, and illegal actions of the plant staff rather than checking on the accuracy of the accounting statements submitted by the enterprise to its control agencies.

## II

However precise the cost planning, however accurate the cost reporting, the control which the superior administrative organ exercises over costs can never be anything but indirect. The glavk can set cost goals and can confer rewards and apply sanctions in accordance with their fulfillment, but the actual control is inevitably in the hands of the managerial apparatus within the enterprise, the men who are in control of the day-to-day operations of the enterprise. Their ability to control costs depends on a sys-

<sup>22</sup> The decrees outlining the responsibilities of the various auditing organs are to be found in Goloshchapov, op. cit., 6-11.

tem of cost accounting which provides them with frequent and detailed reports on the performance of the units under their jurisdiction.

Soviet accounting has traditionally been weak in what is called in the United States "managerial accounting," and until recently was poorly designed for the purpose of assisting management at the enterprise level in controlling costs. The energies of the bookkeeping department have been concentrated mostly on the compilation of the system of reports described in the previous section. It is expected that these reports will also be used by the management of the enterprise to analyze the work of the enterprise and to serve as a basis for cost control, but actually they are not well adapted for this purpose. It will be recalled that the focus of interest in the reports to the superior organ is the operation of the plant as a whole, or the costs of individual kinds of output. For the purpose of internal control, however, it is necessary to look at the operations of the enterprise in terms of individual processes, operations, and administrative units. If the supervisors at the various levels of management are to control costs they must be able to fix responsibility for overexpenditures in terms of persons rather than only in terms of products or gross categories of outlay. Since the bookkeeping department has been so absorbed in working out the reports to the superior organ, it has neglected to develop a system of internal reporting to those responsible for individual units, operations, and processes. This tradition is explainable primarily in terms of two factors, namely (1) the role of the chief bookkeeper in the Soviet system of industrial administration and (2) the primitive technology of Soviet accounting.

(1) The chief bookkeeper of the Soviet enterprise has traditionally been the servant of the superior organ rather than of the enterprise director.<sup>23</sup> Because of the strategic position which he occupies with regard to the operations of the enterprise, he has been given the responsibility of serving as the "eye of the state"

<sup>&</sup>lt;sup>28</sup> The most recent legislation defining the responsibility and functions of the chief bookkeeper is the 1947 "Statute concerning the chief (senior) bookeepers of state, co-operative and public institutions, organizations and enterprises." It may be found in Goloshchapov, op. cit., 13–18.

within the enterprise and of checking on the legality of the actions of the director and other officials of the enterprise. Although the chief bookkeeper is subordinated to the director in an administrative sense, he is subordinated directly to the bookkeeping department of the superior organ as far as accounting procedure is concerned. He has the right to appeal to the superior organ if the orders of the director are illegal, and his loyalty is further ensured by making his appointment or removal subject to the approval of the glavk, and by the fact that his premia are granted directly by the superior organ rather than by the enterprise director. Thus the superior organ has first claim on the services of the chief bookkeeper, and compliance with its demands often leaves him little time for acting as an adviser to the enterprise director.

(2) Because of a low level of mechanization, the bookkeeping department of the Soviet enterprise does not have the computational capacity to prepare the detailed system of reports which is necessary for effective cost control. In a large enterprise the task of collecting data in a breakdown by individual units and processes within the plant, and the preparation of reports in the same detail, becomes a formidable problem of data processing. In most Soviet enterprises this computational work is all done with pen and ink, with no mechanical aids other than the schety, the Russian abacus.24 Given the first priority of reporting to the superior organ the bookkeeping department is simply unable to take on this additional job.

Because of these two factors, Soviet cost accounting has characteristically been carried out only in very aggregative terms. Cost centers are not distinguished, materials are not charged to specific operations or units, but only to the production account of the shop or enterprise as a whole. Moreover, the costs of subsidiary shops such as the power station or the repair shop have not usually been allocated among the consumers of their services. The bookkeeping department may not even docu-

<sup>24</sup> It is stated that of the 2.3 million persons doing computational work in the Soviet economy in 1947, no more than three or four per cent did their work with the aid of electric computing machinery. P. Nosov and T. Tirzbanurt, "Mekhanizatsiia ucheta i uluchshenie raboty administrativno-upravlencheskogo apparata," *Planovoe Khoziaistvo* (1953:4), 94.

ment the movement of semi-fabricates, tools, or materials through the various processes, but simply let outlays accumulate in a single production account for the plant as a whole, and then write them off to finished production at the end of the accounting period on the basis of an inventory.<sup>25</sup> It is said that even in such an important plant as the Cheliabinsk tractor plant, up through 1948 the materials accounting was such that it was impossible to know what units of the plant were responsible for the consumption of various metals, or even to know in what part of the tractor these metals were being consumed.<sup>26</sup>

Since the war there has been a considerable effort made to improve the techniques of cost control within the plant, primarily through the method of "intra-plant accountability." The essence of intra-plant accountability is the disaggregation of the over-all plan into individual assignments, including cost assignments, for individual units within the enterprise. There is usually also some sort of incentive offered for performance, such as premia or sharing of the economies achieved with the workers responsible. As these plans are described in the literature, they seem to be essentially the same as the sort of cost control methods used in American enterprises.<sup>27</sup>

From the literature that has grown up around the postwar campaign for intra-plant accountability it is obvious that even in many of the largest and most important enterprises it was not used before about 1948. One wonders how widely it has been adopted even now. According to G. Bocharov, a high official of the central bookkeeping department of the Ministry of Machine-building, intra-plant accountability had been introduced into most of the largest machine building plants by 1951, but not in medium-sized or small plants.<sup>28</sup> As both Soviet

<sup>&</sup>lt;sup>25</sup> Afanas'ev, op. cit., 76.

<sup>&</sup>lt;sup>20</sup> A. S. Kon'kov, Ekonomiia materialov na zavode (Moscow, 1952), 7.

<sup>&</sup>lt;sup>27</sup> See for instance Stanley Henrici, Standard Costs for Manufacturing (New York, 1953), for a description of some of these methods; and OEEC, Cost Accounting and Productivity (Paris, 1952), for the impressions of a group of European experts concerning their use in the United States.

<sup>&</sup>lt;sup>28</sup> "Nauchno-proizvodstvennaia konferentsiia po voprosam vnutrizavodskogo khozrascheta," *Voprosy Economiki* (1951: 6), 111.

and American writers point out, these techniques require a great deal of preparatory work in the way of setting objective norms for all processes, in defining responsibilities, and in improving internal planning, and so there is no reason why we should expect the Russians to be able to "implant" intra-plant accountability very rapidly.

In connection with what was said earlier about the role of the bookkeeper in the enterprise, it is interesting to find considerable evidence that the bookkeeping department has been an unwilling participant in this effort to strengthen internal cost control. The official position is that accounting for the fulfillment of intra-plant cost goals should be integrated with the regular system of cost accounting in the enterprise. Apparently, however, the bookkeeping departments in many enterprises have refused to cooperate in remodeling their accounting procedures to make it possible to account for fulfillment of the intra-plant cost assignments. There are many complaints that the bookkeepers stand aside from the problem of intra-plant accountability,29 and one writer cites an interesting case in which the bookkeeping department of the superior organ held that the duties of the bookkeeping department in the enterprise did not include handling the accounting for fulfillment of internal cost goals.<sup>30</sup>

Failure of the bookkeeping department to remodel its accounting procedures to suit the needs of intra-plant khozraschet may make it virtually impossible to check on the fulfillment of intra-plant cost goals. For instance, it is reported that in some enterprises the bookkeeping department handles its materials accounting on an actual cost basis, rather than on a planned cost basis; as a result individual production units may appear to fail to fulfill the cost goals, whereas it is really the fault of the supply department. The same problem arises with regard to the costs of the services of subsidiary shops such as the power station.31

## Ш

Reading the Soviet literature on the control functions of cost accounting, one is struck by its similarity to the American literature on the subject. The Russians use essentially the same general techniques as are used in American enterprises. Such devices as the "technicalindustrial-financial plan," "normed accounting," and "intra-plant accountability," for all their Soviet flavor, have virtually identical counterparts in American management practice. This similarity is not surprising. The objective problem of controlling costs in large complicated enterprises is the same in both the capitalist and the planned economy, and moreover there is considerable evidence that the Russians have been directly influenced by American ideas.<sup>32</sup> Nevertheless there are some distinctive features of the Soviet situation which interfere with the effective use of these techniques. The over-all effect of these peculiarities on Soviet cost accounting can be summarized in two generalizations. (1) The cost accounting system has been biased too much toward the needs of outside control organs. (2) Probably as a corollary, there is an overemphasis on the unit of production as the costing unit.

As was said earlier, expenses are usually classified in Soviet cost reports by general economic category and by product rather than by center of responsibility or by individual operations and processes. From the point of view of the superior organ this makes sense. First of all, unit cost data are needed for the purpose of price setting. In the second place, this sort of cost plan and cost report presents the generalized indicators of fulfillment which are necessary for its main task of cost control. Such breakdowns as are given, though superfluous

82 Much of the accounting literature used in the Soviet Union in the late 1920's and early 1930's consisted of translations of American and German works. The visit of a Soviet delegation to the Sixth International Congress on Accounting in New York in 1929, and a subsequent tour of some American plants, gave a great impetus to the Soviet enthusiasm for American accounting methods. This delegation recommended among other things that American accounting experts be engaged to improve Russian accounting. One such expert, who worked for the Institute of Management Technique in the early 1930's, said that this organization made great use of American literature and experience in working out recommendations for Soviet plants. J. L. Wurman, "Cost Accounting and Management in Soviet Russia," N.A.C.A. Bulletin, XII (February 1931), 908.

<sup>&</sup>lt;sup>29</sup> A. Vorob'eva, "Puti ukrepleniia tsekhovogo khozrascheta," Voprosy Ekonomiki (1951:4), 48-49; and "Nauchnoproizvodstvennaia konferentsiia po voprosam vnutrizavodskogo khozrascheta," Voprosy Ekonomiki (1951:6), 106.

<sup>30</sup> S. K. Tatur, Khozraschet i rentabel'nost' (Moscow, 1951), 146.

\*\* Vorob'eva, op. cit., 48-49.

to any judgment about the over-all fulfillment of the cost plan, permit the *glavk* to make useful comparisons between product costs in different plants and thus reveal "reserves" for lowering production costs.

It is expected that these same reports will be analyzed and used by enterprise management for controlling costs, but in fact they are illsuited to this purpose. It is much more useful for the purposes of cost control to plan and report expenses not in terms of final products, but in terms of individual operations and processes and in terms of administrative units within the enterprise. Both of these breakdowns assist in revealing where expenditures or saving occur, and thus make it possible to assign responsibility for them. Likewise both of these breakdowns permit the revelation of poor performance more quickly after it occurs - if overexpenditures are revealed only when finished products have been assembled and their costs computed, it is then too late for management to take the necessary corrective action. It would be possible, of course, to perform both kinds of cost accounting, and in the postwar period an attempt has been made to graft onto the system of cost calculation and reporting required for the use of outside control agencies a system of internal cost calculation and reporting for the use of management. As we might expect, the attempt to carry on both forms of cost accounting puts a severe strain on the bookkeeping department and causes an inflation of bookkeeping staffs. In the most recent period the regime has reacted to the growth in the bookkeeping labor force by calling for a rationalization and simplification of accounting and for a reduction in the volume of reporting. Nevertheless it seems likely that there will be a continued improvement in the use of cost accounting data for the purposes of cost control within the plant in the future. It seems significant that the main emphasis in the current campaign has been for a reduction in the volume of reporting to outside organs, and in any case prospective increases in the degree of mechanization of accounting will make it possible for the bookkeeping department to handle this work, whatever the outcome of the present campaign.