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## ECONOMIC INTELLIGENCE REPORT

# SOVIET NATIONAL ACCOUNTS FOR 1955



CIA/RR 133

28 May 1958

## CENTRAL INTELLIGENCE AGENCY

### OFFICE OF RESEARCH AND REPORTS

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ECONOMIC INTELLIGENCE REPORT

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(ORR Project 14.1547)

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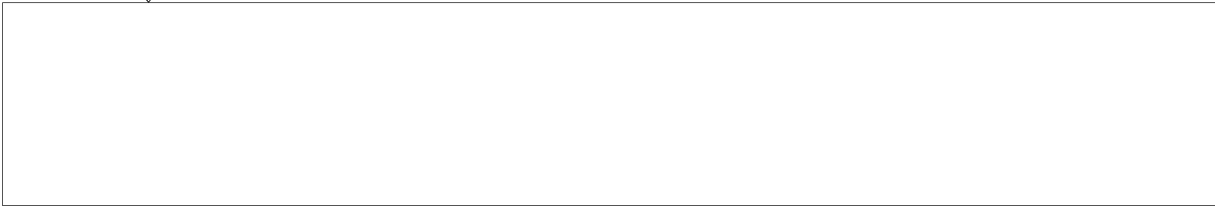
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FOREWORD

National accounts studies serve several specific requirements of the intelligence community: (1) together with appropriate ruble-dollar ratios, they provide the basis for intercountry comparisons of national product in National Intelligence Estimates; (2) deflated by appropriate price indexes, national accounts series measure the growth of the Soviet economy; (3) the end-use and sector-of-origin breakdowns of national accounts furnish information on the structure of the economy and the directions of economic policy; and (4) many of the components derived in the construction of national accounts are themselves of intelligence interest, such as the urban wage bill, agricultural incomes, household consumption expenditures, and gross capital formation.



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This report has been coordinated within ORR but not with other IAC agencies.

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SOVIET NATIONAL ACCOUNTS FOR 1955\*

Summary

In 1955 the gross national product (GNP), or total output of goods and services, of the USSR amounted to 1,286 billion rubles in established prices. When GNP is adjusted from an established price basis to a factor-cost basis, in order to eliminate the effect of the unproportionate distribution of indirect taxes and subsidies, an adjusted factor-cost GNP of 961 billion rubles is obtained. Of this total, 59 percent was devoted to consumption, 25 percent to investment, 13 percent to defense, and 3 percent to government administration.

National income, or the sum of all labor and enterprise incomes, was 907 billion rubles at adjusted factor cost. About 37 percent of this total originated in industry and construction; 27 percent in agriculture; 9 percent in transport and communications; and the remaining 27 percent in trade, government services, and other services.

Converted on the basis of appropriate ruble-dollar ratios, Soviet GNP at established prices was equivalent to 1955 US \$146 billion.\*\*

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\* The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 January 1958.

\*\* Unless otherwise indicated, dollar values in this report are in terms of US dollars.

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I. Introduction.

There is no single measure adequate to assess the economic capability of a nation, as the quantity desired depends on the purpose for which it is needed -- for example, to estimate military strength, consumer welfare, or growth. The closest approach to a general appraisal of the over-all productive capacity of an economy is an estimate of the net value of total goods and services produced during a specified period, usually 1 year. This measure of total output is called gross national product (GNP). Estimation of GNP is accomplished through the construction of national accounts for the economy. In addition to measuring total size, however, national accounts can be organized to show other aspects of the economy, such as the end use of its output, the industrial origin of its national income, and intersectoral relationships.

The system of national accounts used in this report is intended to show these and other facets of the Soviet economy as well as to derive total GNP. It is a modification of the accounting system recommended by the Organization for European Economic Cooperation (OECC) 1/<sup>\*</sup> and the UN. 2/ This system involves a twofold classification of economic transactions, both monetary and nonmonetary. Each transaction is classified by transactor and by type of economic activity.

A. Four groups of transactors are distinguished and designated as "sectors": households, nonagricultural enterprises, agricultural enterprises, and the government. The Household Sector comprises all individuals. The Nonagricultural Enterprise Sector includes all enterprises and organizations outside of agriculture which produce goods and services for sale. The Agricultural Enterprise Sector includes all such enterprises and organizations in agriculture. The Government Sector comprises government agencies and organizations engaged in administration, education, health, defense, and police services, which are organized for, but not normally sold to, the community.

B. Three types of economic activity are distinguished and designated as "accounts": production, appropriation or consumption, and capital formation. The Production Account of each sector presents the revenue and expenses connected with its productive activity. On the credit side are its sales and other revenues. On the debit side are its purchases of goods and services outside the sector, indirect taxes, capital consumption allowances, and the factor income generated in the sector. The Appropriation Account shows on the credit side

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income received and on the debit side the disposition of this income. The Capital Account lists on the credit side the sources of funds for asset formation and on the debit side the types of asset formation accomplished.

This classification of economic activity excludes transactions with foreign countries and thus dispenses with the need for a fourth, or external, account to record such transactions. In the virtual absence of a balance of payments for the USSR, it is not possible to construct an external account. Therefore, it is assumed for the purposes of this report that the USSR is a closed economy not trading outside its own boundaries. The effect of this assumption on total GNP and its end use and origin distributions is considered slight because only net foreign sales or purchases of goods and services are included in the calculation of GNP. Thus, whereas exports or imports may be important in individual Soviet industries, only the difference between total foreign sales and total foreign purchases affects GNP.

The accounting system used is of the double-entry type. Every transaction appears twice, once as a credit in an account of the selling sector and once as a debit in an account of the purchasing sector. The sources and methodology used to derive a given transaction are discussed only once, however, normally in the debit or credit entry of the sector which has the initiative in determining the size of that transaction. Thus, for example, Household Sector purchases of goods and services from the Nonagricultural Enterprise Sector are discussed fully in the Household Sector, whereas in the Nonagricultural Enterprise Sector this transaction is merely recorded and reference is made to the discussion of the Household Sector entry.

The double-entry feature provides a check on the accuracy of individual estimates and on the consistency of the intersectoral relationships obtained. Wherever possible, debits and credits were estimated independently. In these cases, statistical discrepancies proved reassuringly small. Where data limitations did not permit independent estimation of debits and credits, it was necessary to derive the total debits of an account from its total credits, or vice versa. In these instances the dependence of one side of the account on the other explains the absence of a statistical discrepancy.

The precision implied by the present set of accounts and the detail in which the data are presented fail to disclose the ranges of uncertainty which surround particular estimates within the accounts. The accounting frame of reference used differs from that employed by the USSR in preparing the data upon which the report rests. For this reason, it has been

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necessary in many instances to adjust the official data available to fit this different accounting frame of reference. Further, on occasion it has been necessary to derive particular estimates as residuals from larger reported totals. Both of these operations have been severely hampered by the lack of detailed data and knowledge of what is included in the reported totals. As a result, although the detailed data presented in the accounts adequately reflect relative orders of magnitude, the individual entries should be viewed as having varying degrees of uncertainty attached to them.

All figures in this report are in current (1955) rubles. Neither the official Soviet exchange rate of 4 rubles per US \$1 for merchandise transactions nor the official Soviet exchange rate of 10 rubles per US \$1 for tourist and other "invisible" transactions is appropriate for converting national accounts entries from rubles to dollars. Moreover, ruble-dollar ratios cannot be calculated for most of the entries, because these entries refer to money flows, such as profits, taxes, and saving, which by their very nature do not have unit prices that can be compared to construct ruble-dollar ratios. Ruble-dollar ratios are available, however, to convert into dollars Soviet GNP as a whole -- that is, total final sales of goods and services. In III, below, Soviet GNP at established prices has been converted to dollars in order to permit comparison with the GNP of other countries.

This report consists of 3 principal sections and 4 appendixes which supplement the basic text. In section II the national accounts of the USSR in 1955 are presented in terms of the 4 sectors and 3 accounts described above. In section III the distribution of GNP by end use is calculated first at established prices; then, in order to eliminate the effect of the unproportionate incidence of indirect taxes and subsidies, the end-use distribution is adjusted to a factor-cost basis. In section IV the distribution of national income by sector of origin is calculated both at established prices and at adjusted factor cost. In Appendix A, Soviet budget revenues and expenditures are classified according to national accounts entries. In Appendix B the derivation of various entries in the accounts of the Agricultural Enterprise Sector is explained.

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II. Basic National Accounts.A. Household Sector.

The Household Sector includes all individuals normally resident in the USSR. Its accounts show their income from labor services and transfer payments and the use of this income for consumption and asset formation.

1. Production Account.

The Household Production Account records only the services produced and sold by domestic servants, who, according to national accounting practice, are considered members of the Household Sector in their working capacity as well as in their capacity as consumers. The production activities of artisans, professional people, and owners of property are recorded in the Nonagricultural Enterprise Sector. The Household Production Account is not included in this report, because the wages of domestic servants and the sale of domestic services cannot be reliably estimated from available data.

2. Appropriation Account.

Account 1\* records on the debit side the disposition of household income through the purchase of goods and services, taxes, dues and other payments to public organizations (such as trade unions), and saving. On the credit side it lists the sources of income. The various types of income-in-kind are listed both as debits and as credits.

a. Purchase of Goods and Services from Own Sector.

This entry, which represents the purchase of domestic services from the Household Production Account, cannot be estimated.

b. Purchase of Goods and Services from Other Sectors.(1) Nonagricultural Enterprise Sector.

Total household purchases of goods and services from the Nonagricultural Enterprise Sector in 1955 are estimated to be 524.4 billion rubles, the sum of state and cooperative retail purchases, services purchases, rent of state housing, imputed rent, and forced labor subsistence.

\* Account 1 follows on p. 8.

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## Account 1

Soviet National Accounts, 1955: Appropriation Account  
of the Household Sector

Billion Rubles

Debit		Credit	
Purchase of goods and services from own sector	N.A.	Income from own sector	N.A.
		Income from other sectors	755.3
Purchase of goods and services from other sectors	744.1	Urban cash incomes	468.9
Nonagricultural Enterprise Sector	524.4	Nonagricultural Enterprise Sector	358.8
State and cooperative retail purchases of goods	454.2	Worker and employee wages	307.4
Services	48.0	Cooperative artisan wages	15.5
Rent of state housing	4.1	Forced labor wages	14.4
Imputed rent	8.7	Profits distributed to cooperative members	1.5
Forced labor subsistence	9.4	Other urban labor incomes	20.0
Agricultural Enterprise Sector	197.4	Agricultural Enterprise Sector	4.5
Collective farm market purchases	50.5	Government Sector	105.6
Farm household income-in-kind	145.0	Government civilian employee wages	77.2
Other purchases	1.9	Military pay	28.4
Government Sector	22.3	Rural cash incomes	104.7
Taxes	54.3	Wages in state agriculture	32.3
Dues and other payments to public organizations	8.0	Cash labor-day payments to collective farmers	30.0
Insurance premiums	1.0	Income of farm households from sale of farm products	40.4
Saving	40.6	Other	2.0
Statistical discrepancy	-32.2		



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## Account 1

Soviet National Accounts, 1955: Appropriation Account  
of the Household Sector  
(Continued)

		Billion Rubles	
Debit			Credit
	Incomes-in-kind		181.7
	Military sub- sistence		22.3
	Farm household income-in-kind		145.0
	Imputed rent		8.7
	Investment-in-kind		5.7
	Transfer receipts		60.5
	Pensions		45.1
	Stipends		6.7
	Interest		6.9
	Other		1.8
Total	<u>815.8</u>	Total	<u>815.8</u>

(a) State and Cooperative Retail Purchases of Goods.

Household purchases for consumption purposes are equal to total state and cooperative retail trade turnover less institutional purchases, household purchases for nonconsumption purposes, and household purchases of minor services. Total state and cooperative retail trade turnover in 1955 was 501.9 billion rubles. <sup>3/</sup>

Institutional purchases in 1955 are obtained from data in the 1956 trade plan. According to the plan, total state and cooperative retail trade turnover in 1956 was to be 108 percent of 1955, institutional purchases were to be 7.6 percent of total 1956 turnover, and these purchases were to be 107 percent of actual 1955 institutional purchases. <sup>4/</sup> Then 1955 institutional purchases must have been 7.7 percent (7.6 percent of 108 divided by 107) of total state and cooperative trade turnover in 1955, or 38.6 billion rubles.

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Household purchases through state and cooperative retail trade for nonconsumption purposes include (1) purchases of building materials for private house building and (2) purchases of producer goods for farm household production. Purchases of building materials are estimated at 3.7 billion rubles, the difference between 9.4 billion rubles, total investment in private housing, and 5.7 billion rubles, the portion of that investment represented by labor investment-in-kind (see 3, a, p. 18, below). Purchases of producer goods for farm household production are estimated at 1.2 billion rubles (see C, 1, a, p. 38, below). Total household purchases for nonconsumption purposes are thus 4.9 billion rubles.

Household purchases of minor services, such as repairs of clothing and other household articles, have been included in the Soviet series on retail trade since 1951. <sup>5/</sup> The total amount of these expenditures in 1955 is estimated at 4.2 billion rubles. This estimate is based on information that receipts of local industry and producer cooperatives from repair services are planned at 5.5 billion rubles in 1960, or 69 percent more than in 1955. <sup>6/</sup> Receipts in 1955 must therefore have been 3.3 billion rubles. This figure is increased by about 25 percent, to 4.2 billion rubles, to include other miscellaneous services in retail trade.

Household purchase of goods for consumption therefore amounted to 454.2 billion rubles, the difference between total retail trade purchases of 501.9 billion rubles and the sum of institutional purchases of 38.6 billion rubles, household purchases for nonconsumption purposes of 4.9 billion rubles, and household purchases of services in retail trade of 4.2 billion rubles.

(b) Services.

Household purchases of services have been estimated at 48 billion rubles. Purchases of services from the retail trade network, such as tailoring and shoe and watch repair, have been estimated above at 4.2 billion rubles (see (a), p. 9, above). In addition, it has been estimated <sup>7/</sup> that 43 billion rubles were spent for the following other services: entertainment, 8 billion rubles; urban transport, 4 billion rubles; other passenger fares, 16 billion rubles; postal and telecommunications charges, 3 billion rubles; domestic electricity and gas charges, 4 billion rubles; domestic water purchases, 3 billion rubles; and baths, laundries, hairdressing, and hotels, 5 billion rubles. Total purchases from and outside the retail trade network, 47.2 billion rubles, have been rounded upward to 48 billion rubles to allow for additional miscellaneous services.

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This estimate of household outlays for services is consistent with Soviet statements on the composition of household expenditures. A Soviet source states 8/:

To noncommodity expenditures of the population -- payments for communal, transport, cultural, and other types of services, as well as taxes, compulsory and voluntary payments -- are directed less than one-fourth of all money incomes of the population. More than three-fourth of the money incomes of the population are spent on the acquisition of goods through the system of Soviet trade . . . .

Because direct Soviet data are available on total household commodity expenditures but not on total household incomes, the shares cited above have been applied to household expenditures rather than to household incomes. Household expenditures may be divided into commodity and non-commodity items in the following manner. Expenditures for commodities are 505.6 billion rubles, the sum of state and cooperative retail purchases of goods by households of 459.1 billion rubles (see (a), p. 9, above) and collective farm market purchases of 46.5 billion rubles (see (2), (a), p. 13, below). Expenditures on noncommodity items are 156.8 billion rubles, the sum of taxes, 54.3 billion rubles (see D, 2, g, (1), p. 68, below); dues and other payments to public organizations, 8 billion rubles (see d, p. 14, below); gross bond purchases, 31.2 billion rubles (see 3, b, (1), p. 19, below); increase in savings deposits, 5.3 billion rubles (see 3, b, (2), p. 20, below); outlays for rent, 4.1 billion rubles (see (c), below); purchase of goods outside the "system of Soviet trade," 5.9 billion rubles (see C, 1, e, (1), (b) and (c), p. 42, below); and outlays for services, estimated above as 48 billion rubles. Total household expenditures are thus 662.4 billion rubles, of which 505.6 billion rubles, or 76.3 percent, are expenditures on commodity items, and 156.8 billion rubles, or 23.7 percent, are expenditures on non-commodity items.

(c) Rent of State Housing.

Rent payments in 1955 were computed by applying the official rental rate of 1.32 rubles per month (or 15.8 rubles per year) per square meter of dwelling space 9/ to the average amount of dwelling space in 1955. The average amount of dwelling space in 1955 may be estimated from Soviet sources. It has been stated that total floor space at the end of 1955 was 432 million square meters and that 23.9 million square meters of floor space in public housing were constructed during 1955. 10/ It may therefore be assumed that

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average total floor space during 1955 amounted to 420 million square meters. Rental rates are charged on the basis of living space, which is 62 percent of total floor space. 11/ Living space in 1955 is thus 62 percent of 420 million, or 260 million, square meters. At the rental rate of 15.8 rubles per year the explicit rent bill is 4.1 billion rubles.

(d) Imputed Rent.

Imputed rent on owner-occupied housing was calculated by multiplying privately owned dwelling space, all of which was assumed to be owner-occupied, by the appropriate rental charge. Total imputed rent of 8.7 billion rubles is the sum of imputed rent on urban private housing, 1.5 billion rubles, and imputed rent on rural housing, 7.2 billion rubles.

Dwelling space in urban private housing in 1955 is estimated at 146 million square meters. 12/ Rent is imputed at two-thirds of the state urban housing rate of 1.32 rubles per month, or 15.8 rubles per year (see (c), p. 11, above), in recognition of the inferiority of private housing to state housing in regard to quality of construction, availability of utilities, and distance from place of employment. 13/ At an annual rental charge of 10.6 rubles the imputed rent of 146 million square meters is 1.5 billion rubles.

Because rural housing is typically a log cabin without separate kitchen or plumbing facilities, dwelling space is taken as equal to total estimated space of 914 million square meters. 14/ A rental rate of half of the state urban housing rate of 15.8 rubles per year is imputed. At this rate of 7.9 rubles per year, imputed rent on rural housing is estimated at 7.2 billion rubles per year.

(e) Forced Labor Subsistence.

(See B, 2, a, (3), p. 28, below.)

(2) Agricultural Enterprise Sector.

Total household purchases of goods from the agricultural Enterprise Sector in 1955 amounted to 197.4 billion rubles, the sum of all purchases on the collective farm market, farm income-in-kind, and other purchases.

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(a) Collective Farm Market Purchases.

Total urban collective farm market trade turnover in 1955 was 48.9 billion rubles. <sup>15/</sup> Part of this total consists of institutional purchases, which must be deducted to obtain the figure for household purchases on the collective farm market. It has been shown (see (1), (a), p. 9, above) that institutional purchases represented 7.7 percent of state and cooperative retail trade in 1955. It is felt that this percentage is too high for institutional purchases on the collective farm market and that a lower figure, perhaps 5 percent, would be more accurate. As far as collective farms themselves are concerned, they do not ordinarily require the type of goods offered on the collective farm market; as for state institutions, every attempt would be made to purchase necessary goods from state and cooperative retail trade outlets, where prices are lower. Institutional purchases on the collective farm market are therefore estimated at 5 percent of 48.9 billion, or 2.4 billion, rubles, leaving 46.5 billion rubles for household purchases.

To this is added 4 billion rubles for purchases on the rural collective farm market, which are not included in the published figure for collective farm market trade (see C, 1, e, (1), p. 42, below). Total household purchases on the collective farm market are therefore 46.5 billion rubles plus 4 billion rubles, or 50.5 billion rubles.

(b) Farm Household Income-in-Kind.

(See C, 1, e, (1), p. 42, below.)

(c) Other Purchases.

(See C, 1, e, (1), p. 42, below.)

(3) Government Sector.

The 22.3 billion rubles of household purchases from the Government Sector consist of military subsistence (see D, 1, c, (3), p. 63, below).

c. Taxes.

Household tax payments are estimated at 54.3 billion rubles (see D, 2, g, (1), p. 68, below).

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d. Dues and Other Payments to Public Organizations.

This entry represents payments by households to "public organizations," such as trade unions and the Communist Party, all of which are classified in the Government Sector. It consists of estimated dues of 5.8 billion rubles and other payments of 2.2 billion rubles.

The 5.8 billion rubles paid in dues consist of the following: 2.4 billion rubles for trade union dues; 1.9 billion rubles for Communist Party dues; and 1.5 billion rubles to other organizations, such as the Komsomol and Spartak.

For 1955, trade union dues were planned at 286.6 percent of the 1946 level. <sup>16/</sup> Dues in 1946 were planned at 845 million rubles, as planned expenditures on aid to needy trade union members were stated to be 200.2 million rubles, or 23.7 percent of membership dues. <sup>17/</sup> Dues in 1955 are therefore estimated at 286.6 percent of 845 million rubles, or 2.4 billion rubles.

Communist Party membership dues are estimated at 1.9 billion rubles. Because Party members commonly occupy administrative positions, it is assumed that their income is much higher than the average worker and employee wage of 8,600 rubles per year or approximately 700 rubles per month (see B, 2, a, (1), p. 26, below). On the assumption that the average wage of Party members is 1,500 rubles per month, average monthly dues, corresponding to 1.5 percent of wages, <sup>18/</sup> would amount to 22.5 rubles and average yearly dues to 270 rubles. Total Party membership in 1955 may be estimated at 7.1 million, on the basis of the announcement at the Twentieth Party Congress in February 1956 that membership was then 7.2 million. <sup>19/</sup> Dues may then be estimated at 270 times 7.1 million, or 1.9 billion rubles.

In the absence of data on membership dues to smaller organizations, 1.5 billion rubles have been added to allow for membership dues to Komsomol, Spartak, and similar organizations.

The estimate of nondues payments of 2.2 billion rubles represents the sum of nondues payments to trade unions of 1.5 billion rubles and nondues payments to the Communist Party of 0.7 billion rubles. For trade unions, total income is made up of dues payments, transfers from the social insurance budget, and other fees and payments made by the population. <sup>20/</sup> Dues payments are estimated above to be 2.4 billion rubles. Transfers from the social insurance budget are earmarked for "organizational-administrative" outlays, such as wages of union officials, maintenance of a staff to inspect working

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conditions, and support of factory physicians caring for insured workers. 21/ These administrative expenditures were estimated at approximately 0.7 billion rubles (see D, 1, a, (1), (e), p. 60, below). If it is assumed that total income in 1955 was equal to total expenditures, or 4.6 billion rubles (see D, 1, a, (1), (e), p. 60, below), then other fees and payments by the population were 1.5 billion rubles, the difference between total revenue of 4.6 billion rubles and the income received from other sources (2.4 billion rubles of dues payments and 0.7 billion rubles of funds from the social insurance budget).

Similarly, for the Communist Party, nondues payments are taken to be the difference between total revenue and the dues portion of revenue. In 1955, dues represented 73 percent of total Party revenues. 22/ As dues have been estimated above at 1.9 billion rubles, total revenue would be 2.6 billion rubles and nondues revenue 0.7 billion rubles. It is believed that the nondues revenue of public organizations represents payments by the population not included in entries above for taxes and trade purchases.

e. Insurance Premiums.

In the USSR, insurance premiums are paid by collective farms insuring their property and by individuals insuring their property or their lives. Planned indemnity payments to collective farms and households in 1956 were 2 billion rubles. 23/ It is assumed that premiums were equal to indemnities and that the 1955 level was also 2 billion rubles. Premium payments by collective farms have been estimated at 1 billion rubles (see C, 2, b, (3), p. 52, below), leaving 1 billion rubles for premium payments by households.

f. Saving.

(See 3, d, p. 22, below.)

g. Statistical Discrepancy.

This item represents the excess of the sum of all debits, 848 billion rubles, over the sum of all credits, 815.8 billion rubles.

h. Income from Own Sector.

This entry, which represents the wages of domestic servants, cannot be estimated.

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i. Income from Other Sectors.

Total income from other sectors of 755.3 billion rubles is the sum of (1) urban cash income, 468.9 billion rubles; (2) rural cash incomes, 104.7 billion rubles; and (3) incomes-in-kind, 181.7 billion rubles.

(1) Urban Cash Incomes.(a) Nonagricultural Enterprise Sector.

Nonagricultural Enterprise Sector incomes of 358.8 billion rubles are composed of the following:

i. Worker and Employee Wages.

Total nonagricultural worker and employee wages in 1955 amounted to 307.4 billion rubles (see B, 2, a, (1), p. 26, below).

ii. Cooperative Artisan Wages.

(See B, 2, a, (2), p. 28, below.)

iii. Forced Labor Wages.

For forced labor wages, 14.4 billion rubles, see B, 2, a, (3), p. 28, below.

iv. Profits Distributed to Cooperative Members.

(See B, 2, a, (4), p. 29, below.)

v. Other Urban Labor Incomes.

(See B, 2, a, (5), p. 31, below.)

(b) Agricultural Enterprise Sector.

Urban household cash income from the Agricultural Enterprise Sector was 4.5 billion rubles, the amount received for the sale of farm products (see C, 2, a, (4), p. 50, below).

(c) Government Sector.i. Government Civilian Employee Wages.

(See D, 1, a, (1), p. 57, below.)



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ii. Military Pay.

(See D, 1, a, (2), p. 61, below.)

(2) Rural Cash Incomes.

Rural cash incomes of 104.7 billion rubles are composed of the following:

(a) Wages in State Agriculture.

(See C, 2, a, (1), p. 48, below.)

(b) Cash Labor-Day Payments to Collective Farmers.

(See C, 2, a, (2), p. 49, below.)

(c) Income of Farm Households from Sale of Farm Products.

(See C, 2, a, (4), p. 50, below.)

(d) Other.

Other income consists of collective farm administrative wages and wages of hired labor (see C, 2, a, (2), (b) and (c), p. 50, below).

(3) Incomes-in-Kind.

(a) Military Subsistence.

(See D, 1, c, (3), p. 63, below.)

(b) Farm Household Income-in-Kind.

(See C, 1, e, (1), (d), p. 43, below.)

(c) Imputed Rent.

(See A, 2, b, (1), (d), p. 12, above.)

(d) Investment-in-Kind.

(See 3, a, p. 18, below.)

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j. Transfer Receipts.(1) Pensions.

(See D, 2, b, (1), p. 65, below.)

(2) Stipends.

(See D, 2, b, (2), p. 66, below.)

(3) Interest.

(See D, 2, b, (3), p. 66, below.)

(4) Other.

This item is the sum of cash payments to collective farmers from collective farm social-cultural funds, 0.8 billion rubles (see C, 2, a, (3), p. 50, below), and insurance indemnity payments to the population, 1 billion rubles (see e, p. 15, above).

3. Capital Account.

Account 2\* lists as debits the various kinds of household asset formation and as credits the sources of funds for this asset formation.

a. Gross Capital Formation.(1) Capital Repairs.

This entry cannot be reliably estimated from available data. The amount in question, however, is considered negligible.

(2) New Fixed Investment.

New fixed investment of 9.4 billion rubles represents the value of private urban and rural housing constructed in 1955. The former is estimated at 3.4 billion rubles and the latter at 6 billion rubles. <sup>24/</sup> It is estimated that investment-in-kind, in the form of the labor furnished by individuals building their houses, represents one-half of the value of urban private housing construction and two-thirds of the value of rural private housing construction. Total investment-in-kind in private housing is thus estimated at 1.7 billion plus 4 billion or 5.7 billion, rubles.

\* Account 2 follows on p. 19.

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## Account 2

Soviet National Accounts, 1955: Capital Account  
of the Household Sector

		Billion Rubles	
Debit		Credit	
Gross capital formation	9.4	Saving	40.6
Capital repairs	N.A.	Net borrowing from Government Sector	1.5
New fixed investment	9.4		
Capital transfers to Government Sector	30.2		
Net purchase of government bonds	24.9		
Additions to savings deposits	5.3		
Additions to cash balances	2.5		
Total	<u>42.1</u>	Total	<u>42.1</u>

b. Capital Transfers to the Government Sector.(1) Net Purchase of Government Bonds.

Net bond purchases are the difference between gross bond purchases and bond retirement during the year. Gross bond purchases consist of subscriptions to the annual mass loan and of voluntary purchases at the savings banks during the year. Government receipts from subscriptions to the annual mass loan in 1955 were 30.2 billion rubles, 25/ and purchases at savings banks may be estimated from Soviet data at 1 billion rubles. 26/ Total gross bond purchases were therefore 31.2 billion rubles.

Bond retirement for 1955 was estimated at 6.3 billion rubles by dividing loan service payments to the public between interest and principal retirement. Total loan service payments to the population in 1955 amounted to 12.2 billion rubles. 27/ Principal retirement was separated from interest, in annual loan service, by examining the various bond issues on which loan service was paid in

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1955 and reconstructing the schedule of loan service payments. Loan service was paid through two types of lottery drawings: prize drawings and nonprize drawings. One-third (or 35 percent in the case of some issues) of the value of each bond issue was retired over the 20-year life of the issue by prize drawings, in which the lucky bondholders received prizes larger than the face value of their bonds, which were then surrendered. The remaining two-thirds (or in some cases 65 percent) of each bond issue was retired during the 6th to the 20th years of the life of the issue by nonprize drawings, in which bonds were purchased at face value. The chance element of this lottery existed in determining how long the bondholder waited to get back his principal. The principal components of loan service thus consisted of the face value of bonds retired in prize drawings and the total value of nonprize drawings.

Principal retirement was subtracted from gross bond purchases to obtain net bond purchases, as follows:

	<u>Billion Rubles</u>
Gross bond purchases	31.2
Less: Bond retirement	6.3
Equals: Net bond purchases	<u>24.9</u>

Interest payments were calculated by subtracting bond retirement from total loan service payments to the population, as follows:

	<u>Billion Rubles</u>
Loan service payments to population	12.2
Less: Estimated retirement of principal	6.3
Equals: Estimated interest	<u>5.9</u>

These interest payments appear as transfer payments to households in 2, j, p. 18, above.

(2) Additions to Savings Deposits.

The increase in savings deposits in 1955 was 5.3 billion rubles. 28/

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c. Additions to Cash Balances.

The increase in currency held by the population has been estimated on the basis of two assumptions. First, it is assumed that all of the increase during 1955 in currency outside the banking system occurred in the holdings of households -- that is, that there was no change in the currency holdings of enterprises. Second, it is assumed that total currency in circulation bore the same relation to the worker and employee wage bill in 1955 that it did in 1940.

The latter assumption has been made in the face of two offsetting trends affecting the size of the worker and employee wage bill and the amount of currency held by the population. On the one hand, the share of the total employed population included in the worker and employee labor force has increased as a result of the movement of peasants into the urban labor force and of the inclusion in the worker and employee labor force of certain occupations formerly excluded. These developments would decrease the ratio of currency in circulation to the worker and employee wage bill. On the other hand, since 1953, rural non-worker-and-employee incomes have risen more rapidly than urban incomes as a result of post-Stalin agricultural measures. In view of the greater propensity of the rural population to hoard savings instead of returning them to the banking system, this development would increase the ratio of currency in circulation to the worker and employee wage bill. In the absence of data from which to assess the net impact of these offsetting trends, the 1940 relationship between currency in circulation and the worker and employee wage bill is assumed to have prevailed in 1955.

The average amount of currency in circulation in 1940 was approximately 15.3 billion rubles, the mean of the estimated amounts in circulation on 1 January 1940, 15.5 billion rubles, and on 1 January 1941, 15 billion rubles. <sup>29/</sup> The worker and employee wage bill in 1940 may be estimated to be 126.4 billion rubles, the product of the average wage of 4,054 rubles <sup>30/</sup> times the average number of workers and employees, 31,192,000. <sup>31/</sup> Currency in circulation thus amounted to 12.1 percent of the wage bill in 1940.

In order to apply this percentage, the annual wage bill at the rates of 1 January 1955 and 1 January 1956 must be estimated. Currency in circulation on those two dates may then be computed and the increase determined.

The annual worker and employee wage bill at the 1 January 1955 rate is assumed to be the mean of the wage bills for 1954 and 1955. The 1954 wage bill is estimated at 394.8 billion rubles, the product of the average number of workers and employees, 47,287,000, <sup>32/</sup>

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times the estimated annual average wage of 8,350 rubles. This average wage is estimated by applying the official Soviet money wage index of 206 33/ to the 1940 wage figure of 4,054 rubles. The 1955 wage bill is estimated below (see B, 2, a, (1), p. 26, below) at 415.6 billion rubles. The mean of the 1954 and 1955 wage bills, 405.2 billion rubles, is assumed to represent the wage bill at the 1 January 1955 rate. Currency in circulation on 1 January 1955 is estimated at 12.1 percent of this figure, or 49 billion rubles.

The wage bill for 1955 is assumed to be the mean between the bill at the 1 January 1955 rate and at the 1 January 1956 rate. In order to yield a 1955 wage bill of 415.6 billion rubles when the 1 January 1955 rate was 405.2 billion rubles, the 1 January 1956 rate must be 426 billion rubles. Currency in circulation on 1 January 1956 is then estimated at 12.1 percent of this figure, or 51.5 billion rubles.

The increase in 1955 in currency in circulation, all of which is assumed to represent additions to cash balances of the population, is therefore 2.5 billion rubles, the difference between currency in circulation on 1 January 1955, 49 billion rubles, and on 1 January 1956, 51.5 billion rubles.

d. Saving.

Saving is derived as a residual -- that is, the difference between total credits, which are equal to total debits, and the one known credit item, net borrowing from the Government Sector.

e. Net Borrowing from the Government Sector.

(See D, 3, b, (1), p. 72, below.)

B. Nonagricultural Enterprise Sector.

This sector comprises all state enterprises outside agriculture, producer and consumer cooperatives, and independent artisans and professional men. It also includes certain imputed activities, such as the self-rental or owner-occupied dwellings and the labor furnished by individuals building their own houses.

1. Production Account.

Account 3\* records as debits the production expenses of the sector and as credits its revenue from sales and its subsidies.

\* Account 3 follows on p. 23.

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## Account 3

Soviet National Accounts, 1955: Production Account  
of the Nonagricultural Enterprise Sector

Billion Rubles

Debit		Credit	
Purchases from Other Sectors (Agricultural Enterprise Sector)	88.7	Sales to other accounts	964.1
Indirect taxes	324.5	Household Sector	533.8
Turnover taxes	242.4	Appropriation account	524.4
Other enterprise taxes and payments	82.1	Capital account	9.4
Capital consumption allowances	51.9	Nonagricultural Enterprise capital account	176.4
Income originated	527.2	Agricultural Enterprise Sector	60.9
Statistical discrepancy	3.8	Production account	20.5
		Capital account	40.4
		Government Sector	193.0
		Production account	169.9
		Capital account	23.1
		Subsidy receipts	32.0
Total	<u>996.1</u>	Total	<u>996.1</u>

a. Purchases from Other Sectors (Agricultural Enterprise Sector).

(See C, 1, e, (2), p. 43, below.)

b. Indirect Taxes.

Indirect taxes consist of turnover taxes and other enterprise taxes and payments.

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(1) Turnover Taxes.

(See D, 2, g, (2), (c), p. 68, below.)

(2) Other Enterprise Taxes and Payments.

Other enterprise taxes and payments are estimated at 82.1 billion rubles, the difference between the total of other enterprise taxes and payments and the sum of (a) those taxes and payments borne by the Agricultural Enterprise Sector and (b) payments to the banking system from the Nonagricultural Enterprise Appropriation Account.

	<u>Billion Rubles</u>	
Other enterprise taxes and payments (see D, 2, f, p. 67, below)		85.2
Less: Indirect taxes of Agricultural Enterprise Sector (see C, 1, b, p. 41, below)	2.0	
Payments to banking system by cooperatives (see 2, b, (3), p. 32, below)	1.1	3.1
Equals: Other enterprise taxes and pay- ments from the Nonagricultural Enterprise Production Account		<u>82.1</u>

c. Capital Consumption Allowances.

Capital consumption allowances are spent for new fixed investment and for capital repairs. Capital consumption allowances spent for capital repairs are estimated at approximately 60 percent of total capital consumption allowances on the basis of percentages given for various sectors; the respective figures are 52 percent for industry, 75 percent for transport, and 62 percent for state farms. <sup>34/</sup> Therefore, capital consumption allowances for new fixed investment, which in 1955 were planned at 21.8 billion rubles, <sup>35/</sup> are taken to equal 40 percent of total capital consumption allowances. The latter may thus be estimated at 54.5 billion rubles, of which 2.6 billion rubles were charged in agriculture (see C, 1, c, p. 41, below), leaving 51.9 billion rubles for capital consumption allowances in the Nonagricultural Enterprise Sector. No capital consumption allowances are charged in the Government Sector. Of total capital consumption allowances devoted to capital repair of 32.7 billion rubles, 1.6 billion



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rubles were spent in the Agricultural Enterprise Sector (see C, 3, a, (1), (b), p. 53, below), leaving 31.1 billion rubles for the Nonagricultural Enterprise Sector.

d. Income Originated.

(See 2, d, p. 32, below.)

e. Statistical Discrepancy.

This item represents the excess of the sum of all credits, 996.1 billion rubles, over the sum of all debits, 992.3 billion rubles.

f. Sales to Other Accounts.(1) Household Sector.(a) Appropriation Account.

(See A, 2, b, (1), p. 7, above.)

(b) Capital Account.

(See A, 3, a, p. 18, above.)

(2) Nonagricultural Enterprise Capital Account.

(See 3, a, p. 33, below.)

(3) Agricultural Enterprise Sector.(a) Production Account.

(See C, 1, a, p. 38, below.)

(b) Capital Account.

This item of 40.4 billion rubles is the difference between total gross capital formation in agriculture, 53.6 billion rubles (see C, 3, a, p. 53, below), and that part represented by purchases from the Agricultural Enterprise Production Account, 13.2 billion rubles (see C, 1, e, (3), p. 45, below).

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(4) Government Sector.(a) Production Account.

(See D, 1, c; p. 62, below.)

(b) Capital Account.

(See D, 3, c, p. 74, below.)

g. Subsidy Receipts.

(See D, 2, c, p. 67, below.)

2. Appropriation Account.

Account 4\* shows the distribution of the income originated in the Nonagricultural Enterprise Sector.

a. Payments to the Household Sector.(1) Worker and Employee Wages.

Wages of workers and employees of the Nonagricultural Enterprise Sector, 307.4 billion rubles, are equal to the total worker and employee wage bill, 415.6 billion rubles, less wages of workers and employees in other sectors, 108.2 billion rubles.

The total worker and employee wage bill of 415.6 billion rubles is obtained by multiplying the average number of workers and employees in 1955 by the average wage. The average number of workers and employees in 1955 was 48,360,000. <sup>36/</sup> The average wage is estimated at 212 percent of the 1940 wage level of 4,054 rubles, <sup>37/</sup> or 8,594 rubles. The increase in average wages from 1940 to 1955 was calculated from information in Soviet sources concerning real wage indexes.

A real wage index is obtained by dividing a money wage index by a consumer expenditures price index. Although Soviet sources often mention real wage changes, they do not show the price index used in these calculations. This price index is presumably a weighted average of state retail, collective farm market, and services price indexes. It is possible to derive the 1955 index number (1940 = 100) for this index from Soviet statements on real and money wage changes in Soviet industry. It is stated in one source that the

\* Account 4 follows on p. 27.

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Account 4

Soviet National Accounts, 1955: Appropriation Account  
of the Nonagricultural Enterprise Sector

		Billion Rubles	
		Debit	Credit
Payments to Household Sector	373.2		Income originated 527.2
Worker and employee wages	307.4		
Cooperative artisan wages	15.5		
Forced labor wages	14.4		
Profits distributed to cooperative members	1.5		
Other urban labor incomes	20.0		
Imputed rent	8.7		
Investment-in-kind	5.7		
Payments to Government Sector	124.6		
Direct taxes			
Profits taxes of state enterprises	97.0		
Income taxes of cooperatives	5.1		
Social insurance	21.4		
Payments to banking system by cooperatives	1.1		
Saving	29.4		
State enterprises	24.7		
Cooperatives	4.7		
Total	<u>527.2</u>	Total	<u>527.2</u>

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average money wage in industry in 1955 was 230 percent of the 1940 level. 38/ Elsewhere it is stated that real wages in industry in 1955 were 190 percent of the 1940 level. 39/ Comparison of the money and real wage index numbers indicates a consumer price index number of 121 ( $230 \div 190$ ) for 1955 (1940 = 100).

Real wages of workers and employees in 1955 were stated to be 175 percent of the 1940 level. 40/ If it is assumed that the same price index was used here as in the preceding statement on real wage changes in industry, the money wage index number for workers and employees in 1955 (1940 = 100) must be 175 times 121, or 212.

This index number is consistent with the trend of average worker and employee wages in the past few years. In 1953, money wages were 201 percent of 1940 41/; in 1954, 206 percent of 1940 42/; in 1956, 3 percent above the 1955 level. 43/ An index number of 212 for 1955 (1940 = 100) gives a series of yearly increases in money wages of 2.5 to 3 percent between 1953 and 1956.

Worker and employee wages outside the Nonagricultural Enterprise Sector are 108.2 billion rubles -- the sum of those in the Agricultural Enterprise Sector, 32.3 billion rubles, and in the Government Sector, 75.9 billion rubles. The Agricultural Enterprise Sector figure consists of wages in state agriculture (see C, 2, a, p. 48, below). The Government Sector figure is equal to the government civilian wage bill, 77.2 billion rubles (see D, 1, a, p. 57, below), less the wages of Communist Party employees (1.3 billion rubles), who, according to a Soviet source, are not included in the "worker and employee" figures. 44/

### (2) Cooperative Artisan Wages.

In the absence of any data on the wage levels of cooperative artisans, it is assumed that the 1.8 million persons in this category in 1955 45/ received the average worker and employee wage of 8,594 rubles per year. On this assumption the total wage bill was 15.5 billion rubles.

### (3) Forced Labor Wages.

Recent analysis of forced labor wages 46/ indicates an average forced labor wage of approximately 400 rubles per month, or 4,800 rubles per year, in 1955. According to a study of population and electoral data, 47/ the number of nonvoting Soviet citizens in 1955 was about 2.5 million. On the one hand, this figure includes citizens who did not vote because of health or similar

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reasons as well as citizens in prison camps. On the other hand, it does not include prisoners in labor camps who were not Soviet citizens -- for example, nationals of other countries. It is assumed that the total number of Soviet and foreign forced laborers in the USSR in 1955 was approximately 3 million. At an annual wage of 4,800 rubles, the total forced labor wage bill is 14.4 billion rubles.

Of the 400 rubles credited monthly to each prisoner, 260 rubles were deducted for subsistence, 60 rubles were spent by prisoners at camp stores, and the remaining 80 rubles were paid by prisoners in taxes or bond subscriptions or appropriated by the camp administration. <sup>48/</sup> In this report the subsistence deduction, amounting to 9.4 billion rubles per year (260 x 12 x 3 million), is classified as a household purchase (see A, 2, b, (1), (e), p. 12, above). Expenditures at camp stores are believed to be included in the figure for state and cooperative retail purchases (see A, 2, b, (1), (a), p. 9, above). The remainder, representing taxes, bond subscriptions, and appropriation by the camp administration, is assumed to be included in other entries, such as taxes and bond purchases in the Household Sector accounts and taxes and retained profits in the Nonagricultural Enterprise Sector accounts.

(4) Profits Distributed to Cooperative Members.

This entry is the sum of estimated profit distribution to members of producer cooperatives, 0.7 billion rubles, and to members of consumer cooperatives, 0.8 billion rubles.

For producer cooperatives, total profits before tax in 1955 are estimated at 7 billion rubles on the basis of 1954 profits data and 1954 and 1955 output data. In 1954, producer cooperative profits were 5.9 billion rubles. <sup>49/</sup> Producer cooperative output in 1954 was 55 billion rubles and was planned at 62.4 billion rubles in 1955. <sup>50/</sup> Actual output in 1955, however, was 105 percent of plan, <sup>51/</sup> or 65.5 billion rubles. Output therefore increased 19 percent from 1954 to 1955. If it is assumed that profits increased proportionally, 1955 profits may be estimated at 119 percent of the 1954 figure of 5.9 billion rubles, or 7 billion rubles.

Producer cooperative income taxes in 1955 were planned at 3.5 billion rubles. <sup>52/</sup> If it is assumed that, like output, actual taxes were 5 percent above plan, income taxes in 1955 may be estimated at 3.7 billion rubles. Net profits are then 7 billion rubles less 3.7 billion rubles, or 3.3 billion rubles. Net profits of producer cooperatives are distributed among several purposes according to fixed percentages. <sup>53/</sup> On the basis of these percentages, the distribution of total profits is estimated as follows:

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	<u>Billion Rubles</u>
Total profits	7.0
Less: Income taxes	3.7
Equals: Net profits	3.3
Distributed to members (20 percent)	0.7
Paid to Trade Bank for long-term credit fund (20 percent)	0.7
Reinvestment (50 percent)	1.6
Other, such as health and old age measures and social facilities (10 percent)	0.3

In the accounting system used in this report, profits distributed to members are recorded here. Payments to the banking system are recorded below (see b, p. 31, below). The remaining 1.9 billion rubles, corresponding to reinvestment and allocations for miscellaneous purposes, are considered retained earnings (see c, p. 32, below).

For consumer cooperatives, total profits in 1955 were 5.4 billion rubles. 54/ Since consumer cooperatives pay an income tax equal to 25 percent of profits, 55/ 1955 income taxes were 1.4 billion rubles, leaving 4.4 billion rubles as net profits. Consumer cooperative net profits are distributed according to a fixed schedule, 56/ which gives the following results when applied to 1955 profits:

	<u>Billion Rubles</u>
Total profits	5.4
Less: Income taxes	1.4
Equals: Net profits	4.0
Distributed to members (20 percent)	0.8
Paid to State Bank for credit fund (10 percent)	0.4
Reinvestment (50 percent)	2.0
Other (20 percent)	0.8

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Profits distributed to members are recorded here. Payments to the banking system are recorded below (see b, below). The remaining 2.8 billion rubles, corresponding to reinvestment and allocations for miscellaneous purposes, are considered retained earnings (see c, p. 32, below).

(5) Other Urban Labor Incomes.

This category includes payments from special funds, such as the director's fund and funds for stimulating "socialist competition"; incomes of individual artisans, such as barbers and photographers; and incomes of persons, such as doctors and plumbers, who furnish their services in a "private" capacity in addition to working as state employees.

[REDACTED] This estimate has been adjusted upward to 20 billion rubles for 1955 to allow for the increase in the size of the labor force and the increase in the average wage level.

50X1

50X1

50X1

(6) Imputed Rent.

(See A, 2, b, p. 7, above.)

(7) Investment-in-Kind.

(See A, 3, a, p. 18, above.)

b. Payments to the Government Sector.(1) Direct Taxes.(a) Profits Taxes of State Enterprises.

Profits taxes in the Nonagricultural Enterprise Sector are equal to total profits taxes, 97.5 billion rubles (see D, 2, g, p. 68, below), less the portion paid by the Agricultural Enterprise Sector, 0.5 billion rubles (see C, 2, b, p. 51, below), or 97 billion rubles.

(b) Income Taxes of Cooperatives.

Income taxes on cooperatives are estimated at 5.1 billion rubles, the sum of estimated income taxes on producer cooperatives, 3.7 billion rubles, and on consumer cooperatives, 1.4 billion rubles (see a, (4), p. 29, above).

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(2) Social Insurance.

Social insurance payments by the Nonagricultural Enterprise Sector are 21.4 billion rubles, the difference between total social insurance payments, 26.5 billion rubles (see D, 2, g, p. 68, below), and the sum of social insurance payments by the Agricultural Enterprise Sector, 1.4 billion rubles (see C, 2, b, p. 51, below), and the Government Sector, 3.7 billion rubles (see D, 1, b, p. 61, below).

(3) Payments to Banking System by Cooperatives.

Cooperatives are required to transfer part of their profits after income tax to the banking system, which uses these funds for loans to cooperatives. This entry consists of transfers from profits of producer cooperatives, 0.7 billion rubles, and from profits of consumer cooperatives, 0.4 billion rubles (see a, (4), p. 29, above).

c. Saving.(1) State Enterprises.

Saving of state enterprises in the Nonagricultural Enterprise Sector is equal to their profits less their profits taxes. Total profits of state enterprises in 1955 were 123.7 billion rubles. 58/ Deduction of 2 billion rubles for profits of state farms (see C, 2, a, (1), (b), p. 49, below) leaves 121.7 billion rubles for profits of state enterprises in the Nonagricultural Enterprise Sector. Deduction of 97 billion rubles for their profits taxes (see b, p. 31, above) leaves as retained earnings or saving 24.7 billion rubles.

(2) Cooperatives.

This entry is the sum of retained earnings of producer cooperatives, 1.9 billion rubles, and of consumer cooperatives, 2.8 billion rubles (see a, (4), p. 29, above).

d. Income Originated.

Income originated, 527.2 billion rubles, is the sum of all debit items in the Nonagricultural Enterprise Appropriation account.



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3. Capital Account.

Account 5\* shows the asset formation of the sector and the sources from which it is financed.

a. Gross Capital Formation.(1) Capital Repairs.

The 34.1-billion-ruble capital repair estimate is a residual intended to bring the sum of agricultural capital repairs (7.9 billion rubles; see C, 3, a, p. 53, below), government capital repairs (3 billion rubles; see D, 3, c, p. 74, below), and nonagricultural capital repairs to 45 billion rubles. This total capital repair estimate is consistent with the estimate of 40 billion rubles for 1954 made in a recent study of Soviet fixed assets. 59/

Of the total of 34.1 billion rubles, it was estimated that 31.1 billion rubles were furnished by amortization allowances (see 1, c, p. 24, above). The remaining 3 billion rubles, it is assumed, were furnished by budget grants.

(2) New Fixed Investment.

This entry is the sum of budget-financed investment of state enterprises, 92.7 billion rubles; investment of state enterprises financed by amortization allowances, 20.8 billion rubles; investment of state enterprises financed by retained earnings, 10 billion rubles; and additional investment by cooperatives and by state enterprises, 3.5 billion rubles.

Budget grants for investment are estimated at 92.7 billion rubles (see D, 3, a, (1), p. 69, below).

Amortization allowances provided 20.8 billion rubles for new fixed investment in the Nonagricultural Enterprise Sector, the difference between total amortization allowances for new fixed investment of 21.8 billion rubles (see 1, c, p. 24, above) and amortization allowances for investment in state agriculture of 1 billion rubles (see D, 3, (1), p. 69, below).

Profits of state enterprises devoted to financing capital investment are estimated at 10 billion rubles. In the original 1955 centralized investment plan, profits were to provide 11.9 billion rubles. 60/ If the profit financing of capital investment had been fulfilled to the same extent as the underfulfillment

\* Account 5 follows on p. 34.

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## Account 5

Soviet National Accounts, 1955: Capital Account  
of the Nonagricultural Enterprise Sector

Billion Rubles

Debit		Credit	
Gross capital formation	176.4	Saving	29.4
Capital repairs	34.1	Capital consumption allowances	51.9
New fixed investment	127.0	Capital transfers from Government Sector	99.6
Additions to inventories	15.3	Net borrowing from Government Sector	11.5
Capital transfers to Government Sector	5.3		
Other	3.8		
Statistical discrepancy	6.9		
Total	<u>192.4</u>	Total	<u>192.4</u>

of the entire profit plan (86.3 percent) <sup>61/</sup> actual profit financing would have been 10.3 billion rubles. However, as profits are an especially important source of capital investment financing in those industries where the percentage of profit underfulfillment was probably greater than average, profit financing of centralized investment is estimated at 9.5 billion rubles. In addition, about 1 billion rubles of state enterprise profits were probably spent for investment outside the central plan, in view of the 1.6 billion rubles intended for this purpose in the original 1955 profit plan. <sup>62/</sup> Thus total profits devoted by state enterprises to financing investment may be estimated at 10.5 billion rubles. Of this amount, about 0.5 billion rubles probably went to agricultural investment, <sup>63/</sup> leaving 10 billion rubles for investment in the Nonagricultural Enterprise Sector.

An additional 3.5 billion rubles of investment outside the centralized investment plan is added to allow for investments of producer cooperatives, which were 1.5 billion rubles <sup>64/</sup>; investments of consumer cooperatives, which were probably about the same amount <sup>65/</sup>; and investments from special funds of state enterprises, like the director's fund.

(3) Additions to Inventories.

Additions to inventories are estimated at 15.3 billion rubles, or 80 percent of the estimated total increase in working capital, 19.1 billion rubles.

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The total increase in working capital consists of retained earnings devoted to expansion of working capital, 6.5 billion rubles; capital transfers from the Government Sector for expansion of working capital, 3.9 billion rubles; and the net increase in short-term borrowing from the State Bank, 8.7 billion rubles.

Total expansion of working capital from retained earnings in both the Nonagricultural and Agricultural Enterprise Sectors was planned at 6.5 billion rubles. <sup>66/</sup> It is assumed that the agricultural portion was negligible and that the total therefore applies to the Nonagricultural Enterprise Sector.

Capital transfers from the Government Sector for the expansion of working capital were 3.9 billion rubles (see D, 3, a, (1), p. 69, below).

The net increase in short-term loans has been estimated at 9.5 billion rubles (see D, 3, b, (2), p. 72, below). Part of these loans is used for the modernization of production techniques and is issued by the State Bank to enterprises for expenses not foreseen in the capital investment plan. These loans for modernization, which increased during 1955 by 0.8 billion rubles, <sup>67/</sup> must be deducted from the increase in total State Bank loans to the Nonagricultural Enterprise Sector, 9.5 billion rubles, to obtain a figure for short-term borrowing devoted to the expansion of working capital, 8.7 billion rubles.

Additions to inventories are estimated at 80 percent of the total increase in working capital on the basis of the estimated distribution of working capital by use on 1 January 1955. This distribution in turn has been derived from analysis of the distribution of working capital by source of financing.

Soviet sources <sup>68/</sup> provide the following information on the distribution of working capital by source of financing on 1 January 1941 and 1 January 1955:

<u>Source of Financing</u>	<u>1 January 1941</u>		<u>1 January 1955</u>	
	<u>Billion Rubles</u>	<u>Percent</u>	<u>Billion Rubles</u>	<u>Percent</u>
Enterprise own funds	65.7	52.9	184.0	49.2
State Bank loans	42.5	34.2	154.8	41.4
State Bank advances against receivables	16.0	12.9	35.2	9.4
Total	<u>124.2</u>	<u>100.0</u>	<u>374.0</u>	<u>100.0</u>

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From this tabulation the distribution of working capital by use may be estimated for 1 January 1941. Bank advances against receivables are equal to net receivables; deposits and cash are known independently 69/; and inventories may be found as a residual, as indicated below:

<u>Use of Working Capital</u>	<u>Billion Rubles</u>	<u>Percent</u>
Net receivables	16.0	12.9
Deposits and cash	13.1	10.5
Inventories	95.1	76.6
Total	<u>124.2</u>	<u>100.0</u>

From the two preceding tabulations the distribution of working capital by use on 1 January 1955 has been estimated. Net receivables on that date were equal to State Bank advances against receivables, 35.2 billion rubles. It is assumed that deposits and cash represented 10.5 percent of working capital, the same share as in 1941. Then inventories are derived as a residual, as indicated below:

<u>Use of Working Capital</u>	<u>Billion Rubles</u>	<u>Percent</u>
Net receivables	35.2	9.4
Deposits and cash	39.3	10.5
Inventories	299.5	80.1
Total	<u>374.0</u>	<u>100.0</u>

On the basis of this distribution for 1 January 1955, it is assumed that 80 percent of the increase in working capital during 1955 was devoted to the expansion of inventories.

b. Capital Transfers to the Government Sector.

(See D, 3, g, p. 76, below.)

c. Other.

An estimated 3.8 billion rubles, or the remaining 20 percent, of the increase in working capital calculated above (see a, (3), p. 34, above), consisted of net receivables and deposits and cash.

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d. Statistical Discrepancy.

This item represents the excess of the sum of credits, 192.4 billion rubles, over the sum of debits, 185.5 billion rubles.

e. Saving.

(See 2, c, p. 32, above.)

f. Capital Consumption Allowances.

(See 1, c, p. 24, above.)

g. Capital Transfers from the Government Sector.

(See D, 3, a, p. 69, below.)

h. Net Borrowing from the Government Sector.

(See D, 3, b, p. 72, below.)

C. Agricultural Enterprise Sector.

This sector consists of machine tractor stations (MTS's), state farms, collective farms, and farm households in their capacity as agricultural producers. MTS's are treated as ordinary state enterprises whose production expenses are covered by revenue from the sale of product and by a subsidy. That is, it is assumed that MTS revenue is returned to the MTS's by the state budget and is supplemented by a subsidy. "State farms" include the state farms proper of various ministries as well as all subsidiary agricultural enterprises of all ministries. "Farm households" comprise the private plot agriculture of both urban and rural residents.

General government services to agriculture, such as experiment stations, forest conservation, and pest control, are excluded from this sector and included instead in the Government Sector, except insofar as fixed investment in these activities is concerned. Data limitations do not permit estimation of the share of total investment in state agriculture which is devoted to these activities. Consequently, their investment has not been deducted from the state agriculture investment total (see 3, a, (2), p. 55, below).

Because total debits were estimated from total credits for each of the agricultural producers -- MTS's, state farms, collective farms, and farm households -- no statistical discrepancy resulted in the accounts of this sector.

## S-E-C-R-E-T

1. Production Account.

In Account 6,\* intrasectoral purchases and sales for current production purposes have been canceled out. For example, state farm sales of seed to collective farms are excluded from both sales (credits) and purchases (debits). Accordingly, purchases include only purchases from other sectors, and sales include only sales to other sectors and sales of capital goods and services to the Agricultural Enterprise Capital Account.

a. Purchases from Other Sectors.

Purchases from the Nonagricultural Enterprise Sector by the four types of agricultural producers totaled 20.5 billion rubles. Generally speaking, this estimate, calculated from indirect data, is subject to a significant margin of error.

(1) MTS's.

MTS expenditures for all purposes except new fixed investment were planned at 23.3 billion rubles, 70/ a figure which, in the absence of fulfillment data, is assumed to have been the actual expenditure. Deduction of 3.8 billion rubles for capital repairs (see 3, a, p. 53, below) leaves 19.5 billion rubles for production and administration wages, social insurance charges on these wages, and materials purchases. Wages and social insurance in production and administration are equal to total wages and social insurance, 17 billion rubles (see 2, a, (1), p. 48, below), less wages and social insurance of capital repair workers, 2.3 billion rubles (see e, (3), (c), p. 45, below), or 14.7 billion rubles. Subtraction of this wage and social insurance bill from the 19.5-billion-ruble figure leaves 4.8 billion rubles for materials purchases for both current use and additions to inventories. It is estimated (see 3, a, (3), p. 56, below) that the latter amounted to 0.3 billion rubles, leaving 4.5 billion rubles for materials purchases for current use. This estimate is consistent with Soviet statements about the magnitude of expenditures for fuel and lubricants, which are by far the most important operational materials purchase of MTS's. These expenditures are said to constitute "about 25 percent" of total MTS production costs. 71/ On the basis of a statement that in 1954 a 1-percent saving in fuel would have resulted in a saving of 40 million rubles, 72/ the 1954 fuel bill may be estimated at 4 billion rubles.

\* Account 6 follows on p. 39.

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## Account 6

Soviet National Accounts, 1955: Production Account  
of the Agricultural Enterprise Sector

Billion Rubles

Debit		Credit	
Purchases from other sectors	20.5	Sales to other accounts	299.3
MTS's	4.5	Household Sector	197.4
State farms	4.4	Urban collective farm market	46.5
Collective farms	10.4	Rural collective farm market	4.0
Farm households	1.2	Other sales	1.9
Indirect taxes	2.0	Farm household income-in-kind	145.0
Capital consumption allowances	2.6	Nonagricultural Enterprise Sector	88.7
Income originated	289.2	State and cooperative acquisitions	83.7
		Sales to institutions	5.0
		Agricultural Enterprise capital account	13.2
		Investment-in-kind	5.0
		Sales to fixed investment	4.4
		Sales to capital repairs	3.8
		Additions to inventories	N.A.
		Subsidy receipts	15.0
		MTS's	13.0
		State farms	2.0
Total	<u>314.3</u>	Total	<u>314.3</u>

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(2) State Farms.

Total materials purchases by state farms are estimated in Appendix B, section 3, at 4.9 billion rubles. To derive purchases outside agriculture, it is necessary to deduct purchases within agriculture from the total. It is believed that the only important purchase by state farms within agriculture for current operations is the purchase of seed and fodder from other state farms. In the absence of data on the distribution of state farm materials purchases, this item has been estimated on the basis of the seed and fodder costs of collective farms, which amounted to 20.9 percent of collective farm production expenditures in 1955 (see (3), below). State farm outlays for this purpose are estimated at 10 percent of state farm operational purchases, in recognition of two differences between collective farm and state farm production expenditures. First, a greater share of state farm purchases is associated with the operation of capital equipment, such as tractors and combines. Second, state farms, many of which are quality seed-breeding establishments, are generally more self-sufficient in meeting their seed requirements. Therefore 10 percent was deducted from total materials purchases of 4.9 billion rubles to obtain purchases of 4.4 billion rubles outside the Agricultural Enterprise Sector.

(3) Collective Farms.

Purchases of 10.4 billion rubles by collective farms are the sum of production purchases, 10.2 billion rubles, and other purchases, 0.2 billion rubles.

In Appendix B, section 1, it is estimated that total money "production expenditures" of collective farms, consisting of materials purchases, payments to hired nonconstruction labor, and money payments for services of MTS's, amounted to 16.3 billion rubles. From this total must be deducted 6.1 billion rubles, representing the sum of payments to MTS's for services rendered, 1.2 billion rubles; wages for hired nonconstruction labor, 1.2 billion rubles (see Appendix B, section 1); materials purchases within the Agricultural Enterprise Sector, 3.4 billion rubles; and materials purchases for additions to inventories, 0.3 billion rubles. Materials purchases within the Agricultural Enterprise Sector are assumed to consist of seed and fodder purchases, which in 1955 represented 20.9 percent of total production expenditures  $\frac{73}{100}$  of 16.3 billion rubles, or 3.4 billion rubles. It is assumed that all of these seed and fodder purchases were from state farms. Purchases for additions to inventories are estimated at a total of 0.6 billion rubles (see 3, a, (3), p. 56, below), of which 0.3 billion rubles were assumed to have been financed



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by bank credit (see 3, f, p. 57, below) outside the "production expenditures" outlay derived in Appendix B, section 1.

To production purchases of 10.2 billion rubles are added 0.2 billion rubles of the collective farms' "administrative-economic expenditures" of 1 billion rubles (see Appendix B, section 1) to allow for purchases of office supplies and services.

(4) Farm Households.

This entry is necessarily a very rough estimate and is based on two assumptions. First, Bergson's estimate that 10 percent of the income of farm households from the sale of farm products is absorbed by money expenses of production is accepted. 74/ Second, assuming negligible purchases for capital investment, it is believed that most of these expenses consist of purchases within agriculture and that a small share of them, nominally estimated at 25 percent, represents purchases from other sectors. Accordingly, it is assumed that 2.5 percent of gross farm household income from the sale of farm products, estimated below (see 2, a, p. 48, below) at 46.7 billion rubles, was spent for purchases from the Nonagricultural Enterprise Sector.

b. Indirect Taxes.

This entry is the sum of taxes paid by collective farms, 1.1 billion rubles; state farms, 0.4 billion rubles; and farm households, 0.6 billion rubles. It is assumed that tax payments by MTS's, as gross budgetary institutions, were negligible. The collective farm estimate is composed of collective farm market fees and other taxes (see Appendix B, sections 1 and 2). State farms, in the aggregate forming a smaller establishment than collective farms, are assumed to have made a smaller payment, estimated at 0.4 billion rubles. Collective farm market fees of farm households are roughly estimated at 0.3 billion rubles (see Appendix B, section 2), and it is assumed that cattle taxes and other fees amounted to the same sum, bringing total collections from farm households to 0.6 billion rubles.

c. Capital Consumption Allowances.

In the Agricultural Enterprise Sector, only state farms charge amortization allowances as an expense against revenue. The estimate of 2.6 billion rubles is obtained by applying the state farm amortization rate of 7.5 percent 75/ to the value of state farm fixed assets at the beginning of 1955, 35 billion rubles. 76/

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d. Income Originated.

(See 2, d, p. 52, below.)

e. Sales to Other Accounts.(1) Household Sector.(a) Urban Collective Farm Market.

(See A, 2, b, (2), (a), p. 13, above.)

(b) Rural Collective Farm Market.

This entry refers to estimated sales of agricultural products by collective farms to the population in rural collective farm markets. It excludes such sales by farm households, which are likewise excluded from household purchases of goods and services. Sales in rural collective farm markets between farm households are difficult to estimate from available data and hence are treated elsewhere in this study as part of farm household consumption-in-kind.

A Soviet source attributes 15.6 billion rubles of collective farm money income in 1955 to "collective farm trade." 77/ It is believed that the designation of "collective farm trade" probably includes all collective farm sales of agricultural products (excluding livestock on the hoof) except those to state and cooperative procurement organs. In Appendix B, section 2, it is estimated that 10.6 of the 15.6 billion rubles represent sales in urban collective farm trade, leaving 5 billion rubles for other sales. It is arbitrarily assumed that this figure of 5 billion rubles in turnover is entirely attributable to transactions in rural collective farm markets. Of the 5 billion rubles, it is estimated that sales to the population accounted for 4 billion rubles and that the balance of 1 billion rubles represents sales to nonfarm institutions.

(c) Other Sales.

This entry represents sales of services and nonagricultural products to the population by collective farms. In 1955, 4.8 billion rubles of money income to the collective farms consisted of "other income." 78/ This category is believed to consist of revenue from the sale of services, such as milling of collective farmers' grain; of revenue from the sale of livestock and non-agricultural commodities, such as firewood and building materials; and of receipts from insurance indemnities. Insurance indemnities

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were estimated in Appendix B, section 1, at 1 billion rubles. It is arbitrarily assumed that half of the remaining 3.8-billion-ruble total consisted of sales of capital goods (such as livestock, bricks, and timber) between collective farms and the other half of sales to the population.

(d) Farm Household Income-in-Kind.

(See Appendix B, section 4.)

(2) Nonagricultural Enterprise Sector.(a) State and Cooperative Acquisitions.

This entry consists of sales to state and cooperative procurement organizations by MTS's, 5 billion rubles; by state farms, 17.9 billion rubles; by collective farms, 55.2 billion rubles; by rural farm households, 4.6 billion rubles; and by urban farm households, 1 billion rubles.

MTS sales of 5 billion rubles represent the amount credited as MTS revenue by procurement organizations for the delivery of crops which the MTS's receive from collective farms as payment-in-kind for services rendered; these deliveries are valued at contractual or obligatory delivery prices. In 1955, total MTS revenue, from money payments and in-kind payments by collective farms, was 6.2 billion rubles. 79/ It was further reported that 80.7 percent of MTS income was received in the form of payments-in-kind, the remainder of 19.3 percent constituting money payments from collective farms for services rendered. 80/ Because the money payments are intrasectoral payments, from one agricultural producer to another, for current production purposes, they are excluded from both sales (credits) and purchases (debits) in these accounts. Revenue of 5 billion rubles from crop deliveries to procurement organizations, which are classified in the Nonagricultural Enterprise Sector, is, however, recorded as an intersectoral transaction.

State farm sales outside agriculture are estimated at 17.9 billion rubles by deducting from estimated total sales, 23.1 billion rubles, the estimated amount of sales within agriculture, 5.2 billion rubles. In 1955 the "marketable production" of state farms of the All-Union Ministry of State Farms was valued at 14 billion rubles. 81/ In the absence of adequate data on the prices and quantities of state farm deliveries, total sales of all state farms are estimated on the assumption that the value of sales per worker for all state farms as a group was the same as value per worker

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of the All-Union Ministry of State Farms. In 1955, production workers of the All-Union Ministry of State Farms numbered 1,617,000, <sup>82/</sup> and the corresponding figure for all state farms was 2,664,000. <sup>83/</sup> It is therefore estimated that total sales of state farms were 2,664 divided by 1,617, or 1.65 times sales of 14 billion rubles by the All-Union Ministry of State Farms. The resulting estimate of total sales, 23.1 billion rubles, is quite consistent with the estimates of state farm expenditures and subsidies in Appendix B, section 3.

From total state farm sales are deducted sales within the Agricultural Enterprise Sector, 5.2 billion rubles. These sales consist of sales of seed and fodder to other state farms, 0.5 billion rubles (see a, (2), p. 40, above); sales of seed and fodder to collective farms, 3.4 billion rubles (see a, (3), p. 40, above); and sales of livestock to collective farms, 1.3 billion rubles. The estimate of livestock sales is based on the assumption that collective farms made about half of their total estimated purchases of 2.5 billion rubles (see (3), (b), p. 45, below) from state farms and half from collective farmers. Whereas the number of head of livestock purchased from state farms was probably less than half the total, this is offset by the greater value per head of prize breeding stock in purchases from state farms.

Collective farm sales to state and cooperative procurement organizations in 1955 were reported as 55.2 billion rubles. <sup>84/</sup>

Rural farm household sales to state and cooperative procurement organizations are estimated in Appendix B, section 2, at 4.6 billion rubles.

Urban farm household sales to state procurement organizations are estimated at 1 billion rubles, on the basis of data in Appendix B, section 2. It is estimated there that rural plots account for about 75 percent of total private plot production and that their obligatory deliveries amounted to 3 billion rubles. Hence it is estimated that total obligatory deliveries from farm households were 4 billion rubles, of which 1 billion rubles were provided by urban households.

(b) Sales to Institutions on Collective Farm Market.

In A, 2, b, (2), (a), p. 13, above, it is estimated that sales to institutions in the urban collective farm markets were 2.4 billion rubles. To this must be added two other items. First, sales to institutions in rural collective farm markets

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are estimated at 1 billion rubles (see (1), (b), p. 42, above). Second, many private sales transactions, especially those between collective farms and institutional purchasers, occur outside the collective farm market and probably go unrecorded in the official estimates for collective farm market turnover. To account for this phenomenon, an allowance for direct private sales to institutions by collective farms of 1.6 billion rubles is made. Total sales to institutions of 5 billion rubles therefore are the sum of sales to institutions in urban collective farm markets, 2.4 billion rubles; in rural collective farm markets, 1 billion rubles; and outside collective farm market channels, 1.6 billion rubles.

(3) Agricultural Enterprise Capital Account.(a) Investment-in-Kind.

This entry is the sum of investment-in-kind of collective farms, 4 billion rubles, and farm households, 1 billion rubles. Investment-in-kind of collective farms consists primarily of collective farmer labor used in construction and of natural increments to livestock herds. The estimate of 4 billion rubles for 1955 is based on estimates for earlier years in a study of postwar agricultural investment. 85/ This report suggests that one-fourth of collective farm investment-in-kind originates in natural livestock increases. Because household livestock ownership is approximately equal to that of collective farms, 86/ it is assumed that investment-in-kind of farm households, in the form of natural livestock increases, was also about 1 billion rubles.

(b) Sales to Fixed Investment.

This item consists of purchases of capital goods, such as livestock and building materials, by collective farms from within the Agricultural Enterprise Sector. Total collective farm livestock purchases in 1955 are estimated at 2.5 billion rubles on the basis of announced expenditures of 2.5 billion rubles for this purpose in 1954. 87/ Because, as the same reference shows, collective farm purchases of livestock have been declining in recent years, the level of such purchases for 1955 is assumed to have been the same as in 1954. In addition, it is estimated that collective farms purchased 1.9 billion rubles of other capital goods from other collective farms (see (1), (c), p. 42, above).

(c) Sales to Capital Repairs.

This entry records the use of internal labor resources for capital repair projects. It is assumed that all materials used in agricultural capital repairs were purchased from the

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Nonagricultural Enterprise Sector but that all labor used for this purpose was furnished by the Agricultural Enterprise Sector itself. Because farm household outlays for capital repairs are considered negligible, this entry is the sum of the labor cost of capital repairs of MTS's, 2.3 billion rubles; state farms, 1 billion rubles; and collective farms, 0.5 billion rubles.

In the case of state agriculture it is assumed that labor cost constituted 60 percent of total capital repairs. This share is applied to MTS capital repairs of 3.8 billion rubles (see 3, a, (1), (a), p. 53, below) to obtain an MTS labor cost of 2.3 billion rubles and to state farm capital repairs of 1.6 billion rubles (see 3, a, (1), (b), p. 53, below) to obtain a state farm labor cost of 1 billion rubles. The cost of collective farm labor devoted to capital repairs is roughly estimated at 0.5 billion rubles (see 3, a, (1), (c), p. 54, below).

(d) Additions to Inventories.

This entry represents sales of agricultural products to agricultural producers for the purpose of building up their working inventories. In the belief that the size of this item is negligible, no estimate has been attempted.

f. Subsidy Receipts.(1) MTS's.

MTS subsidies are defined as total budget appropriations for current operations less revenues credited to the MTS's for money and in-kind payments received from collective farms. Appropriations for current operations are equal to 19.2 billion rubles, the sum of wages and social insurance for production and administration workers, 14.7 billion rubles; and materials purchases for operations, 4.5 billion rubles (see a, (1), p. 38, above). From this total are deducted MTS revenues of 6.2 billion rubles (see e, (2), (a), p. 43, above) to obtain a difference or subsidy of 13 billion rubles.

(2) State Farms.

The state farm subsidy is estimated at 2 billion rubles in Appendix B, section 3.

2. Appropriation Account.

Account 7\* shows the distribution of income originated in the sector.

\* Account 7 follows on p. 47.

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## Account 7'

Soviet National Accounts, 1955: Appropriation Account  
of the Agricultural Enterprise Sector

Billion Rubles

Debit		Credit	
Payments to Household Sector	255.0	Income originated	289.2
		Transfer receipts	1.0
Wages in state agriculture	32.3		
MTS's	16.3		
State farms	16.0		
Collective farm wage payments	32.0		
Cash labor-day payments to collec- tive farmers	30.0		
Administrative wages	0.8		
Wages of hired labor	1.2		
Collective farm transfer payments	0.8		
Farm household income from sale of farm products	44.9		
Rural households	40.4		
Urban households	4.5		
Farm household income- in-kind	145.0		
Payments to Government Sector	9.3		
Direct taxes	6.9		
Profits taxes of state farms	0.5		
Income taxes of collective farms	6.4		

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## Account 7

Soviet National Accounts, 1955: Appropriation Account  
of the Agricultural Enterprise Sector  
(Continued)

		Billion Rubles	
Debit		Credit	
Social insurance	1.4		
MTS's	0.7		
State farms	0.7		
Insurance premiums	1.0		
Saving	25.9		
State farms	1.0		
Collective farms	23.9		
Undistributed profits	19.9		
Investment-in-kind	4.0		
Farm households	1.0		
Total	<u>290.2</u>	Total	<u>290.2</u>

a. Payments to Household Sector.(1) Wages in State Agriculture.(a) MTS's.

Wages of MTS production (including repair) workers in 1955 were planned at 14 billion rubles, 88/ and in the absence of performance data it is assumed that the plan was fulfilled. In addition, wages were paid to administrative personnel. It has been estimated in a RAND study that administrative wages were planned at 2.5 billion rubles in 1953. 89/ In recognition of the subsequent increase in MTS administrative personnel, a figure of 3 billion rubles is estimated for 1955. This total wage outlay of 17 billion rubles is thought, however, to contain social insurance charges, in view of the practice of including social insurance under the wage category in the five-item accounting system used by MTS's for planning and

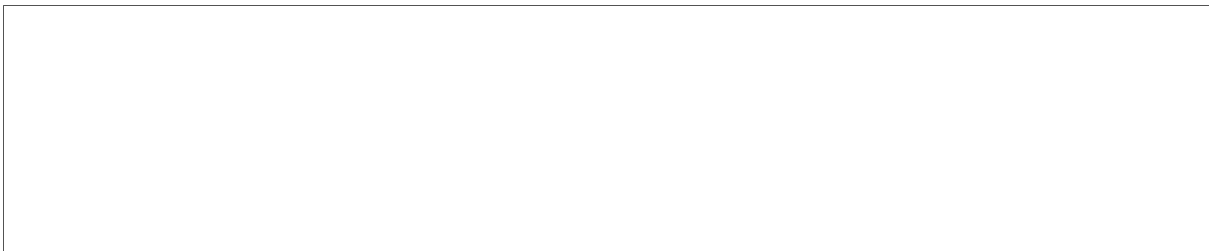
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reporting purposes. 90/ Therefore, social insurance charges have been deducted. As these charges amount to 4.4 percent of the wage bill in state agriculture, 91/ the 17-billion-ruble figure represents 104.4 percent of the estimated wage bill, which then becomes 16.3 billion rubles.

(b) State Farms.



50X1

an average wage of 5,460 rubles per year was applied to the total number of workers and employees in state farms, 2,832,000, 93/ to obtain an estimated basic wage bill of 15.5 billion rubles.

50X1

To this figure was added an estimate for additional labor compensation in the form of retained profits devoted to bonuses and special awards. In 1955, total profits of the All-Union Ministry of State Farms were planned at 2 billion rubles, of which 0.5 billion rubles were to be paid to the budget as profits taxes; 0.5 billion rubles devoted to fixed investment under the central investment plan; and 1 billion rubles in retained profits left at the disposal of the state farms for the formation of the internal insurance fund, the director's fund, and the fund for the expansion of the farm. 94/ In view of their historically low profit level, it is assumed that total net profits and retained profits of all state farms were equal to those planned for the All-Union Ministry of State Farms. Furthermore, it is assumed that half of this estimated 1 billion rubles in retained profits was distributed as supplementary labor compensation and half devoted to fixed investment outside the central plan. Therefore, 0.5 billion rubles were taken as the total supplementary compensation of workers and added to the basic wage bill of 15.5 billion rubles to obtain a total wage bill of 16 billion rubles.

(2) Collective Farm Wage Payments.

(a) Cash Labor-Day Payments to Collective Farmers.

In Appendix B, section 1, it is roughly estimated that these payments amounted to about 40 percent of collective farm money revenues, or approximately 30 billion rubles.

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(b) Administrative Wages.

In Appendix B, section 1, total "administrative-economic" expenditures of collective farms are estimated at 1 billion rubles. On the assumption that wages are the largest component of these expenditures, it is estimated that 0.8 billion rubles were devoted to administrative wages. In addition, some small portion of cash labor-day payments goes to administrative personnel who are members of the farms. <sup>95/</sup> Positive evidence, however, as to the importance of these administrative wages is lacking and therefore no attempt at an estimate is made.

(c) Wages of Hired Labor.

(See Appendix B, section 1.)

(3) Collective Farm Transfer Payments.

This entry represents cash payments to sick and aged collective farmers from the social-cultural funds of the collective farms. In Appendix B, section 1, the total allocation to these funds from collective farm revenues is estimated at 1.1 billion rubles. Of this amount, it is assumed that slightly more than two-thirds, or 0.8 billion rubles, was devoted to pensions and other cash transfer payments and the remainder to fixed investment in social-cultural facilities like schools, reading rooms, and theaters.

(4) Farm Household Income from Sale of Farm Products.(a) Rural Households.

In Appendix B, section 2, sales by rural farm households on the urban collective farm market are estimated at 36 billion rubles, and obligatory deliveries to the state and commission sales to cooperatives are estimated at 4.6 billion rubles. In addition, sales of livestock by collective farmers to collective farms are estimated at 1.2 billion rubles. From these total sales of 41.8 billion rubles is deducted an allowance of 1.4 billion rubles for expenses in the form of collective farm market and other fees, 0.5 billion rubles, and purchases of materials from the Nonagricultural Enterprise Sector, 0.9 billion rubles. The fee expenses are estimated by attributing 0.5 billion rubles, of the 0.6 billion rubles charged to farm households, to rural farm households, which carry on most of the private plot activity (see 1, b, p. 41, above). The materials purchase estimate is derived by allocating to rural households three-fourths of total farm household materials purchases of 1.2 billion rubles (see 1, a, (4), p. 41, above).

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(b) Urban Households.

Collective farm market sales by owners of urban plots are estimated at 3.9 billion rubles in Appendix B, section 2. In addition, it is estimated there that urban plots made obligatory deliveries valued at 1 billion rubles. From total sales of 4.9 billion rubles are deducted expenses of 0.4 billion rubles, in the form of collective farm market and other fees, 0.1 billion rubles, and materials purchases, 0.3 billion rubles. The fee figure is the difference between total estimated fees paid by farm households, 0.6 billion rubles (see 1, a, (4), p. 41, above), and payments by rural households, 0.5 billion rubles. The materials purchase figure is one-fourth of total farm household materials purchases of 1.2 billion rubles (see 1, a, (4), p. 41, above).

(5) Farm Household Income-in-Kind.

(See Appendix B, section 4.)

b. Payments to the Government Sector.(1) Direct Taxes.(a) Profits Taxes of State Farms.

Profits taxes of the All-Union Ministry of State Farms were planned at 0.5 billion rubles (see a, (1), (b), p. 49, above). In 1955, state farms subordinate to other ministries were permitted to retain all of their profits. <sup>96/</sup> Therefore, the All-Union Ministry of State Farms figure is entered here as the total on the assumption that these payments to the state would have had priority and would have been met despite probable underfulfillment of planned profits.

(b) Income Taxes of Collective Farms.

(See D, 2, g, (2), (b), p. 68, below.)

(2) Social Insurance.(a) MIS's.

(See a, (1), (a), p. 18, above.)

(b) State Farms.

This entry is calculated by applying the 4.4-percent social insurance charge in state agriculture (see a, (1),

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(a), p. 48, above) to the basic state farm wage bill of 15.5 billion rubles (see a, (1), (b), p. 29, above).

(3) Insurance Premiums.

(See Appendix B, section 1.)

c. Saving.(1) State Farms.

This entry represents the sum of profits devoted to investment under the centralized investment plan, 0.5 billion rubles, and to noncentrally planned investment through the director's fund and other enterprise funds, 0.5 billion rubles (see a, (1), (b), p. 49, above).

(2) Collective Farms.(a) Undistributed Profits.

The undistributed profits of collective farms consist of the following components: deductions to indivisible funds, 16.5 billion rubles (see Appendix B, section 1); funds earmarked for repayments on long-term loans, 2.3 billion rubles (see Appendix B, section 1); investments from their social-cultural funds, 0.3 billion rubles (see a, (3), p. 50, above); additions to inventories, 0.3 billion rubles (see 3, a, (3), p. 56, below); and the value of labor services rendered on capital repair projects by collective farmers, 0.5 billion rubles (see 3, a, (1), (c), p. 54, below).

(b) Investment-in-Kind.

(See 1, e, (3), (a), p. 45, above.)

(3) Farm Households.

This entry represents investment-in-kind, estimated at 1 billion rubles (see 1, e, (3), (a), p. 45, above).

d. Income Originated.

Income originated is estimated as the sum of all payments made from income originating in the productive activity of the Agricultural Enterprise Sector. It includes transfer payments to collective farmers from the social-cultural fund (see a, (3), p. 50, above) because they are made out of income generated by the productive

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activity of the collective farms, even though they are disbursed on a transfer basis rather than as compensation for services currently rendered. Income originated excludes transfer receipts in the form of insurance indemnities (see e, p. 57, below), however, because these sums are merely transferred within the collective farm community, through the intermediary of the state insurance organization; they do not constitute income generated by productive activity.

e. Transfer Receipts.

Receipts of insurance indemnities, for damage to collective farm property, are assumed to be equal to insurance premiums paid by collective farms, 1 billion rubles (see Appendix B, section 1).

3. Capital Account.

Account 8\* records the asset formation of the sector and the sources from which it is financed.

a. Gross Capital Formation.(1) Capital Repairs.(a) MIS's.

In 1954 the "gross output" of MIS repair stations was 3.6 billion rubles. 97/ In 1955, all repair expenditures increased by 0.2 billion rubles. 98/ It is assumed that the sum of these two figures, 3.8 billion rubles, represents capital repairs, on the ground that current repairs would normally be conducted in the field and only major repairs at repair stations. This assumption is consistent with a Soviet statement 99/ that in MIS's all repairs of agricultural machinery constitute about 25 percent of total appropriations exclusive of new fixed investment. In 1955, total appropriations exclusive of new fixed investment were planned at 23.3 billion rubles (see 1, a, (1), p. 38, above). If all repairs amounted to 25 percent, or 5.8 billion rubles, the estimate of 3.8 billion rubles for capital repairs would leave a reasonable balance for current repairs.

(b) State Farms.

State farms are required to spend on capital repairs a sum equal to 4.7 percent of the original value of existing fixed assets. 100/ Therefore, state farm capital repairs are estimated

\* Account 8 follows on p. 54.

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## Account 8

Soviet National Accounts, 1955: Capital Account  
of the Agricultural Enterprise Sector

		Billion Rubles	
Debit		Credit	
Gross capital formation	53.6	Saving	25.9
Capital repairs	7.9	Capital consumption allowances	2.6
MTS's	3.8	Capital transfers from Government Sector	22.5
State farms	1.6	Net borrowing from Government Sector	2.6
Collective farms	2.5		
New fixed investment	43.0		
State agriculture	18.8		
Collective farms	23.2		
Farm households	1.0		
Additions to inventories	2.7		
Other	N.A.		
Total	<u>53.6</u>	Total	<u>53.6</u>

at 4.7 percent of 35 billion rubles, the value of fixed assets in 1955 (see l, c, p. 41, above), or 1.6 billion rubles.

(c) Collective Farms.

Materials purchases for collective farm capital repairs in 1955 are estimated at 2 billion rubles, on the basis of a Soviet statement that 1.8 billion rubles was spent for this purpose in 1954. 101/ Because money wage compensation to collective farmers, in the form of cash labor-day payments, is so low compared with wage compensation in state agriculture, the 60 percent-labor, 40 percent-materials relationship assumed in state agriculture (see l, e, (3), (c), p. 45, above) was not considered appropriate for collective farms. Instead, it is assumed that the labor component of collective farm capital repair costs was only 20 percent and the materials component 80 percent. On that basis, total repairs are estimated at 2.5 billion rubles.

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(2) New Fixed Investment.(a) State Agriculture.

This entry is the sum of estimated centrally planned state investment in MTS's, state farms, and general agricultural projects, 18.3 billion rubles, and estimated decentralized investment of state farms, 0.5 billion rubles.

At the 20th Party Congress, Khrushchev announced that new fixed investment in state agriculture, presumably under the central plan, during the 2-year period 1954-55 totaled 34.4 billion rubles. <sup>102/</sup> This total has been adjusted from a 1 July 1955 price base to an average 1955 price base, estimated to be about 2 percent higher. <sup>103/</sup> Of the resulting adjusted 2-year total of 35.1 billion rubles, it is estimated that slightly more than half, or 18.3 billion rubles, was spent in 1955. <sup>104/</sup>

To this figure was added 0.5 billion rubles for estimated investment by state farms outside the central plan (see 2, a, (1), (b), p. 49, above).

(b) Collective Farms.

This entry is the sum of investment from indivisible funds, 14.5 billion rubles; investments financed by long-term credits, 4.4 billion rubles; investment-in-kind, 4 billion rubles; and investment from social-cultural funds, 0.3 billion rubles.

Outlays from indivisible funds in 1955 were 16.5 billion rubles. <sup>105/</sup> From this total are deducted outlays for materials for capital repairs, estimated at 2 billion rubles (see (1), (c), p. 54, above). The remainder of 14.5 billion rubles was devoted to fixed investment.

Long-term credits to collective farms in 1955 totaled 4.4 billion rubles. <sup>106/</sup> Although a small portion of these loans was for noncapital outlays, such as fertilizer and young livestock, no deduction has been made from the total, because of the small magnitude involved.

Collective farms' investment-in-kind has been estimated at 4 billion rubles (see 1, e, (3), (a), p. 45, above).

New fixed investments from collective farms' social-cultural funds were estimated at 0.3 billion rubles (see 2, a, (3), p. 50, above).

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(c) Farm Households.

This entry represents farm household investment-in-kind (see 1, e, (3), (a), p. 45, above).

(3) Additions to Inventories.

This entry represents increases in stocks of fuel, fertilizer, and other materials. It is the sum of additions to stocks of state farms, 1.8 billion rubles; collective farms, 0.6 billion rubles; and MTS's, 0.3 billion rubles. Additions by farm households are considered negligible.

The state farm figure is the sum of budget grants for expansion of working capital and the estimated increase in inventories financed by bank credit. Budget grants were planned at 1.6 billion rubles in 1955. 107/ In addition, it is assumed that state farms received 0.2 billion rubles of the 0.5-billion-ruble increase in short-term credit to agriculture (see f, p. 57, below).

In the absence of specific data, collective farm and MTS additions to inventories are estimated roughly on the basis of the state farm figure. Because the budget grant to state farms was intended to organize new state farms in the "virgin lands" as well as to expand the operations of existing farms, 108/ it is believed that additions by collective farms to inventories were only a modest fraction, perhaps one-third, of the state farm total. Therefore, 0.6 billion rubles were assumed for collective farms, of which 0.3 billion rubles are assumed to have come from bank credit (see f, p. 57, below) and 0.3 billion rubles from revenues of collective farms (see 1, a, (3), p. 40, above). As a notional allowance, MTS additions to inventories are estimated at half the collective farm figure, or 0.3 billion rubles.

b. Other.

The increase in monetary assets, such as cash, bank deposits, and receivables, of the Agricultural Enterprise Sector cannot be reliably estimated. It is believed to be relatively small, however, for the corresponding item in the Nonagricultural Enterprise Sector is only 3.8 billion rubles.

c. Saving.

(See 2, c, p. 52, above.)



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d. Capital Consumption Allowances.

(See 1, c, p. 41, above.)

e. Capital Transfers from the Government Sector.

(See D, 3, a, p. 69, below.)

f. Net Borrowing from the Government Sector.

This entry is the sum of net long-term borrowing by collective farms, 2.1 billion rubles, and net short-term borrowing by collective farms and state farms, 0.5 billion rubles (see D, 3, b, p. 72, below). It is assumed that, of the short-term total, collective farms received 0.3 billion rubles and state farms 0.2 billion rubles.

D. Government Sector.

The Government Sector comprises national and local government agencies engaged in providing services which are organized for, but not sold to, the community. These services are primarily health and education, defense, and internal security. This sector also includes organizations and activities which carry out the economic and social policies of the government. In this group are public organizations, such as trade unions and the Communist Party, and the banking system.

1. Production Account.

Account 9\* shows the cost, in terms of wages, social insurance charges, and materials purchases, of providing government services. Because these services are not sold, they are valued at cost on the credit side.

a. Wages of Government Employees.(1) Civilian Employees.(a) Health and Education.

Health and education wages are estimated at 59.5 billion rubles on the assumption that these wages increased from the prewar period to 1955 at the same rate as the wages of workers and employees generally -- that is, that their wages in 1955 were

\* Account 9 follows on p. 58.

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## Account 9

Soviet National Accounts, 1955: Production Account  
of the Government Sector

Billion Rubles

Debit		Credit	
Wages of government employees	105.6	Cost of government services	279.2
Civilian employees	77.2		
Health and education	59.5		
General administration	8.3		
Internal security	3.9		
General agricultural programs	2.5		
Public organizations	3.0		
Military pay	28.4		
Social insurance	3.7		
Purchases from Nonagricultural Enterprise Sector	169.9		
Health and education	28.1		
General administration	3.8		
Military subsistence	22.3		
Military procurement and operations	57.5		
Internal security	3.8		
General agricultural programs	5.3		
Defense programs	32.4		
Research and development programs	5.0		
Public organizations	5.5		
Miscellaneous	6.2		
Total	<u>279.2</u>	Total	<u>279.2</u>

212 percent of the 1940 level (see B, 2, a, (1), p. 26, above). In the absence of wage data for 1940, the 212-percent increase has been applied to wage data for 1941, in the belief that average wages in health and education changed very little from 1940 to 1941.

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The assumption that wages in health and education increased between 1940 and 1955 at the same rate as wages for workers and employees in general is made in the face of two offsetting trends. In the first place, it appears likely that health wages increased more slowly than average wages, in view of the need for a special pay raise for medical workers granted in November 1955. 109/ On the other hand, education workers, at least teachers in lower and middle schools, received significant pay increases in the postwar period. 110/ Therefore, although the procedure adopted here may slightly overstate the health wage bill and understate the education wage bill, the estimate of the total wage bill for workers and employees in health and education appears reasonably accurate, given the limited information available. Moreover, it should be noted that these estimates of the wage portion of total health and education expenditures are in accord with Soviet statements on the proportion of total social-cultural expenditures absorbed by wages. 111/

Average annual wages in health in 1941 were planned at 3,120 rubles. 112/ An increase to 212 percent would bring 1955 wages to 6,610 rubles per year. This figure is applied to the 1955 total number of workers and employees in health, 2,627,000, 113/ to yield a total wage bill in health of 17.4 billion rubles.

Average annual wages in education in 1941 were planned at 4,330 rubles. 114/ An increase to 212 percent would raise the level in 1955 to 9,180 rubles. This figure is applied to the number of workers and employees in education in 1955, 4,582,000, 115/ to yield a total wage bill in education of 42.1 billion rubles.

(b) General Administration.

Wages account for two-thirds of the general administration bill. 116/ In 1955 the general administration bill amounted to 12.5 billion rubles, 117/ and wages were therefore 8.3 billion rubles.

(c) Internal Security.

It is assumed that expenditures on nonmilitarized internal security forces are roughly equal to expenditures on militarized internal security forces. Expenditures on militarized internal security forces are estimated at 7.7 billion rubles, the sum of 5.4 billion rubles for pay (see (2), p. 61, below) and 2.3 billion rubles for subsistence (see c, (3), p. 63, below). Because of the lower pay scales of ordinary guard troops, however, and also because of the inclusion of materials purchases in the nonmilitarized internal security bill, it is assumed that pay represents a smaller

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share of total outlays in the case of nonmilitarized internal security forces than in the case of militarized forces. Consequently, it is assumed that the nonmilitarized internal security bill of 7.7 billion rubles may be divided about equally between pay and materials purchases, yielding a wage bill of 3.9 billion rubles and a purchases bill of 3.8 billion rubles.

(d) General Agricultural Programs.

In this category are included government programs for irrigation, electrification, forest conservation, agricultural experimental stations, and the like. These activities, although financed from the agricultural appropriation of the Soviet budget, are considered government activity in national accounting practice and are therefore included here in the Government Sector. Expenditures for general agricultural programs are taken to be the residual of the budget appropriation to agriculture.

In 1955 the total planned budget appropriation to state agriculture in prices of 1 January 1955 was 55.1 billion rubles. 118/ At the new prices effective 1 July 1955 the original appropriation would have been reduced to 48.1 billion rubles. 119/ If it is assumed that the original plan was fulfilled and that half of the appropriation was made during the first half of the year at old prices and half during the second half of the year at new prices, then total appropriations in 1955 would be the mean of the two figures, or 51.6 billion rubles.

Out of the total appropriation to agriculture, capital transfers and investment in general agricultural programs have been estimated at 22.5 billion rubles (see C, 3, a, (2), (a), p. 55, above, and 2, d, p. 67, below). Noncapital grants to MTS'S and state farms were estimated at 21.2 billion rubles (see C, 1, f, p. 46, above). This leaves a residual of 7.9 billion rubles for noncapital expenditures on general agricultural programs. Of this amount, one-third, or 2.6 billion rubles, is assumed to consist of wage and social insurance payments; at the estimated 5-percent rate (see b, p. 61, below), social insurance payments would be 0.1 billion rubles. The remaining two-thirds, or 5.3 billion rubles, is assumed to consist of materials purchases.

(e) Public Organizations.

This category includes the wages of employees of trade unions, 0.7 billion rubles; the Communist Party, 1.3 billion rubles; and other organizations, 1 billion rubles.

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Trade union wages are estimated at 0.7 billion rubles on the assumption that they are equivalent to the portion of trade union expenditures devoted to administrative expenses. In 1955 these expenses were 15.8 percent of total trade union expenditures, which were planned at 248.1 percent of the 1946 level. 120/ Total planned expenditures in 1946 are estimated on the basis of the following information: expenditures on aid to needy members in 1946 were planned at 200.2 million rubles, or 9.9 percent of total revenues 121/; total revenues were therefore 2.02 billion rubles. As expenditures were planned at 92.7 percent of revenues, 122/ they must have amounted to 1.87 billion rubles in 1946. Total expenditures in 1955 are thus estimated at 248 percent of 1.87 billion rubles, or 4.6 billion rubles. Trade union salaries are estimated at 15.8 percent of this, or 0.7 billion rubles.

Wages of Communist Party employees are estimated at 1.3 billion rubles on the assumptions that total expenditures of the Party were equal to total revenues, estimated at 2.6 billion rubles (see A, 2, d, p. 14, above), and that total expenditures were distributed about equally between wages and other outlays.

In addition, wages for employees of other organizations, such as Komsomol and Spartak, are estimated at 1 billion rubles.

(2) Military Pay.

This entry is the sum of pay of the armed forces proper under the Ministry of Defense, 23 billion rubles, 123/ and the pay of militarized internal security forces, 5.4 billion rubles.

The estimated pay for militarized internal security troops is the product of an estimated average pay rate of 10,000 rubles per year times estimated numbers of 540,000. The pay estimate is based on various defector reports and on the similarity to armed forces officer pay scales. 124/ The strength estimate of 540,000 represents the sum of (a) estimated MVD forces of 440,000, consisting of border troops (300,000), operational troops (100,000), and an upward adjustment of 10 percent (40,000) to allow for the large administrative apparatus of the MVD, 125/ and (b) a rough estimate of 100,000 for militarized KGB forces.

b. Social Insurance.

The social insurance rate for government civilian employees is estimated at 5 percent of the corresponding wage bills on the basis of information for education and health. The rate is

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4.3 percent in middle schools and mass educational institutions and 5.9 percent in health institutions. 126/ Application of the estimated average rate of 5 percent yields total social insurance charges of 3.7 billion rubles, representing the sum of charges on health and education wages, 3 billion rubles; general administration wages, 0.4 billion rubles; general agricultural program wages, 0.1 billion rubles; and public organization wages, 0.2 billion rubles. (See a, p. 57, above, for the respective wage bills.) As internal security employees have their own pension program, no social insurance payments are made on their wages.

c. Purchases from the Nonagricultural Enterprise Sector.(1) Health and Education.

Health and education purchases are estimated at 28.1 billion rubles, the difference between adjusted total health and education expenditures and the portion of those expenditures devoted to wages, social insurance payments, investment, and capital repair.

Adjusted health expenditures are 35.4 billion rubles; the sum of explicit health expenditures, 31.2 billion rubles 127/; and social welfare outlays devoted to health purposes, 4.2 billion rubles (see 2, b, (1), p. 65, below). Adjusted total education expenditures are 62.2 billion rubles, representing total budget expenditures on education, 68.9 billion rubles, 128/ less student stipends, 6.7 billion rubles (see 2, b, (2), p. 66, below).

Combined adjusted expenditures for health and education are thus 97.6 billion rubles. From this amount is subtracted 69.5 billion rubles -- the sum of health and education wages, 59.5 billion rubles (see a, (1), (a), p. 57, above); social insurance payments for health and education employees, 3 billion rubles (see b, p. 61, above); capital repairs, 2 billion rubles (see 3, c, (1), p. 74, below); and fixed investment, 5 billion rubles (see Appendix A, Table 9\*). This subtraction leaves 28.1 billion rubles for health and education purchases.

(2) General Administration.

Total budget outlays for general administration in 1955 amounted to 12.5 billion rubles. 129/ Of this amount, 8.3 billion rubles went to wages of government employees (see a, (1), (b), p. 59, above), and 0.4 billion rubles went for social insurance

\* P. 105, below.

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payments (see b, p. 61, above). It is assumed that government investment for general administrative purposes was negligible. Therefore, the remainder of the administration total, or 3.8 billion rubles, went for government purchases from the Nonagricultural Enterprise Production Account.

(3) Military Subsistence.

This entry is the sum of the subsistence of armed forces under the Ministry of Defense, 20 billion rubles, 130/ and the subsistence of militarized internal security forces, 2.3 billion rubles. The figure for armed forces under the Ministry of Defense, it should be noted, includes subsistence of reservists on active duty as well as regular troops.

The estimated militarized internal security force of 540,000 (see a, (2), p. 61, above) is assumed to receive the armed forces subsistence rate of 4,300 rubles per year per man. 131/ Total subsistence for militarized internal security forces is thus 2.3 billion rubles.

(4) Military Procurement and Operations.

This item consists of the difference between total explicit defense expenditures and the sum of armed forces pay, subsistence, pensions, military investment, and military capital repairs. Total explicit defense expenditures in 1955 were given as 107.4 billion rubles. 132/ Armed forces pay is estimated at 23 billion rubles (see a, (2), p. 61, above); subsistence at 20 billion rubles (see (3), above); pensions at 2.9 billion rubles (see 2, b, (1), p. 65, below); military investment at 3 billion rubles (see 3, c, (2), p. 74, below); and military capital repairs at 1 billion rubles (see 3, c, (1), p. 74, below). The sum of these items, 49.9 billion rubles, is deducted from total defense expenditures, 107.4 billion rubles, to obtain a figure of 57.5 billion rubles for military procurement and operations.

(5) Internal Security.

Purchases for nonmilitarized internal security forces are estimated at 3.8 billion rubles (see a, (1), (c), p. 59, above).

(6) General Agricultural Programs.

(See a, (1), (d), p. 60, above.)

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(7) Defense Programs.

Purchases for atomic energy and other defense-oriented programs are estimated at 32.4 billion rubles (see Appendix A, Table 9\*).

(8) Research and Development Programs.

(See Appendix A, Table 9.\*)

(9) Public Organizations.

Materials purchases represent the difference between total expenditures and labor costs. Total expenditures are 8.7 billion rubles, the sum of trade union expenditures of 4.6 billion rubles; Communist Party expenditures, 2.6 billion rubles; and expenditures of other organizations, 1.5 billion rubles. Trade union expenditures were estimated above (see a, (1), (e), p. 60, above); Communist Party expenditures are assumed to be equal to total revenue (see A, 2, d, p. 14, above); expenditures of other organizations are assumed equal to dues payments (estimated in A, 2, d, p. 14, above). The wage bill has been estimated at 3 billion rubles (see a, (1), (e), p. 60, above), and social insurance payments at 0.2 billion rubles (see b, p. 61, above), leaving 5.5 billion rubles for materials purchases.

(10) Miscellaneous.

Unspecified budget expenditures of 6.2 billion rubles are assumed to represent purchases for current purposes from the Nonagricultural Enterprise Sector (see Appendix A, Table 9\*).

d. Cost of Government Services.

This entry is the sum of wage, social insurance, and materials costs.

2. Appropriation Account.

Account 10\*\* shows on the credit side the receipts of the Government Sector and on the debit side their disposition through the purchase of government services, transfer payments to households and enterprises, and saving.

\* P. 105, below.

\*\* Account 10 follows on p. 65.



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## Account 10

Soviet National Accounts, 1955: Appropriation Account  
of the Government Sector

Billion Rubles

Debit		Credit	
Cost of government services	279.2	Receipts from own sector	3.7
Transfers to Household Sector	59.7	Receipts from other sectors	523.7
Pensions	45.1	Taxes on households	54.3
Stipends	6.7	Taxes on enterprises	436.6
Interest	6.9	Profits taxes	97.5
Insurance indemnities	1.0	Income taxes	11.5
Transfers to Nonagricultural Enterprise Sector	32.0	Turnover taxes	242.4
Price differential reimbursements	17.0	Other enterprise taxes and payments	85.2
Grants to cover losses	15.0	Social insurance	22.8
Transfers to Agricultural Enterprise Sector	16.0	Dues and other payments to public organizations	8.0
Grants to cover losses	15.0	Insurance premiums	2.0
Insurance indemnities	1.0		
Saving	140.5		
Total	<u>527.4</u>	Total	<u>527.4</u>

a. Cost of Government Services.

(See 1, d, p. 64, above.)

b. Transfers to the Household Sector.(1) Pensions.

Pension payments to the population have been estimated as 45.1 billion rubles, which is the sum of pension payments

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from social welfare funds, 42.2 billion rubles, plus estimated military pensions, 2.9 billion rubles. Pension payments from social welfare funds have been estimated as total budgetary expenditures for social welfare of 47.1 billion rubles 133/ less estimated health outlays of 4.2 billion rubles and transfer of funds to trade unions of 0.7 billion rubles. Out of the social insurance appropriation for 1955, it was planned that 2.2 billion rubles would be devoted to health expenditures, such as outlays for building, equipping, and repairing rest homes and sanatoria for workers and employees. 134/ In addition, it is known that funds from the social security appropriation are also spent for operating invalid and old age homes. 135/ It seems reasonable to assume an outlay of 2 billion rubles of social security funds for this purpose, bringing total health expenditures from social welfare funds to 4.2 billion rubles. In addition, 0.7 billion rubles of social insurance funds was transferred to trade unions for administrative purposes (see A, 2, d, p. 14, above). After deduction of these health expenditures and transfers to trade unions, 42.2 billion rubles are left for pension payments from social welfare funds.

Pension payments to career members of the armed services do not come out of social welfare funds; rather, they are part of the defense appropriation. These pension payments in 1955 are estimated at 2.9 billion rubles, bringing total pension payments to the population to 45.1 billion rubles.

(2) Stipends.

Student stipends were planned at 5.8 billion rubles in 1953, 136/ when student enrollment in universities and tekhnikums was 3.2 million. 137/ Enrollment in 1955 is estimated at 3.7 million -- an average of 3.6 million for the 1954-55 school year and 3.8 million for the 1955-56 school year. 138/ On the assumption that stipends increased from 1953 to 1955 in the same proportion as enrollments, stipends in 1955 are estimated at 115.6 percent of the 1953 level, or 6.7 billion rubles.

(3) Interest.

This entry consists of two items -- interest on the government debt and interest on savings deposits. The former was estimated as 5.9 billion rubles (see A, 3, b, (1), p. 19, above). Interest on savings deposits is calculated from information on the rate of interest and total savings deposits. Total savings deposits were 48.4 billion rubles on 1 January 1955 and 53.7 billion rubles on 1 January 1956. 139/ Therefore, the average during 1955 was 51.1 billion rubles. Interest paid on ordinary savings deposits in 1955 was 2 percent. 140/ Interest in 1955 is consequently estimated at 2 percent of 51.1 billion rubles, or 1 billion rubles.

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(4) Insurance Indemnities.

(See A, 2, j, (4), p. 18, above.)

c. Transfers to the Nonagricultural Enterprise Sector.(1) Price Differential Reimbursements.

(See Appendix A, Table 9.\*)

(2) Grants to Cover Losses.

(See Appendix A, Table 9.\*)

d. Transfers to the Agricultural Enterprise Sector.(1) Grants to Cover Losses.

(See C, 1, f, p. 46, above.)

(2) Insurance Indemnities.

(See C, 2, e, p. 53, above.)

e. Saving.

Government Sector saving is the difference between current receipts and current expenditures. It is equal to the excess of total current receipts, 527.4 billion rubles, over the sum of the cost of government services and transfer payments, 386.9 billion rubles.

f. Receipts from Own Sector.

This entry consists of social insurance payments made by government agencies to the social insurance system on behalf of their employees. Because the social insurance system is considered a part of government activity, although it has its own accounts, these payments appear here as government receipts from its own sector (see 1, b, p. 61, above).

\* P. 105, below.

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g. Receipts from Other Sectors.(1) Taxes on Households.

Taxes on households are the sum of "taxes on the population" and other taxes paid by households. "Taxes on the population," consisting of income, agricultural, and bachelor taxes, amounted to 48.3 billion rubles in 1955. 141/

Other taxes are estimated at 6 billion rubles. Local taxes and fees were planned at 7.8 billion rubles in 1955. 142/ It is assumed that half were paid by the population and half by non-agricultural and agricultural enterprises; payments of this type paid by the population may therefore be estimated at 3.9 billion rubles. This figure is increased by approximately half, to 6 billion rubles, to allow for the portion of unspecified budget revenues paid by the population in the form of fines and notarial, passport, and other legal registration fees. 143/

(2) Taxes on Enterprises.(a) Profits Taxes.

Profits taxes on state enterprises are estimated at 97.5 billion rubles, the difference between total profits taxes of 102.8 billion rubles 144/ and that portion representing the return of surplus working capital, which was planned at 5.3 billion rubles. 145/ The latter payment is recorded in the Government Capital Account (see 3, g, p. 76, below).

(b) Income Taxes.

Total budget revenue in 1955 from income taxes and taxes on noncommodity sales (such as entertainment admission fees) amounted to 12.4 billion rubles. 146/ Income from the tax on noncommodity sales was planned at 0.9 billion rubles, 147/ leaving 11.5 billion rubles for income tax payments. Of this sum, 5.1 billion rubles have been estimated for income tax payments of cooperatives (see B, 2, b, (1), (b), p. 31, above); the remainder, representing collective farm income tax payments, was therefore 6.4 billion rubles.

(c) Turnover Taxes.

Turnover taxes in 1955 totaled 242.4 billion rubles. 148/

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(d) Other Enterprise Taxes and Payments.

Other enterprise taxes and payments of 85.2 billion rubles consist of taxes and fees paid by the Nonagricultural and Agricultural Enterprise Sectors and analogous payments by cooperatives to the banking system. Miscellaneous taxes and fees paid by enterprises are estimated at 84.1 billion rubles (see Appendix A, Table 8\*). Payments to the banking system by producer and consumer cooperatives were estimated at 1.1 billion rubles (see B, 2, b, (3), p. 32, above). The figure for miscellaneous taxes and fees is obtained through the distribution of budget revenues. Because it was impossible to estimate independently revenue from state reserve sales, this revenue is included in the total amount of tax receipts. For a more complete discussion of this problem, see 3, c, (3), p. 74, below.

(3) Social Insurance.

Total payments to the social insurance system from all sectors totaled 26.5 billion rubles in 1955. <sup>149/</sup> Payments from the Government Sector of 3.7 billion rubles are deducted (see f, p. 67, above) to obtain a remainder of 22.8 billion rubles for the Nonagricultural and Agricultural Enterprise Sectors.

(4) Dues and Other Payments to Public Organizations.

(See A, 2, d, p. 14, above.)

(5) Insurance Premiums.

(See A, 2, e, p. 15, above.)

3. Capital Account.

Account 11\*\* records the various capital transactions of the Government Sector. As debits it lists the capital outlays of the sector, in the form of its capital grants (transfers), loans, and own real and monetary asset formation. As credits it shows the sources of funds for these outlays.

a. Capital Transfers to Other Sectors.(1) Nonagricultural Enterprise Sector.

Capital transfers to the Nonagricultural Enterprise Sector are the sum of transfers for new fixed investment,

\* P. 104, below.

\*\* Account 11 follows on p. 70.

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## Account 11

Soviet National Accounts, 1955: Capital Account  
of the Government Sector

Billion Rubles

Debit		Credit	
Capital transfers to other sectors	122.1	Saving	140.5
Nonagricultural Enterprise Sector	99.6	Capital transfers from Household Sector	30.2
Agricultural Enterprise Sector	22.5	Net purchase of government bonds	24.9
Net loans to other sectors	15.6	Additions to savings deposits	5.3
Household Sector	1.5	Capital transfers from Nonagricultural Enterprise Sector	5.3
Nonagricultural Enterprise Sector	11.5		
Agricultural Enterprise Sector	2.6		
Government capital formation	23.1		
Capital repairs	3.0		
New fixed investment	5.1		
Other	15.0		
Additions to cash balances	15.2		
Total	<u>176.0</u>	Total	<u>176.0</u>

92.7 billion rubles; capital repairs, 3 billion rubles; and expansion of working capital, 3.9 billion rubles.

In the 1955 budget speech it was specified that 109.3 billion rubles would be furnished by the budget for centrally planned investment. 150/ This plan figure did not, however, take into account the price reductions of 1 July 1955, which slightly reduced

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the budget allocations required. On the other hand, there were significant supplementary allocations for capital investment financed by the budget during the course of 1955. 151/ After considering both factors, it is estimated that total centralized investment financed through the budget was 109.1 billion rubles. Of this total, 16.8 billion rubles went to state agriculture (see (2), below) and 1.1 billion rubles went to centralized investment in educational and health construction (see c, (2), p. 74, below), leaving 91.2 billion rubles for centralized investment in the Non-agricultural Enterprise Sector. In addition, it is estimated that 1.5 billion rubles were provided by the budget for decentralized investment, bringing total budget grants for investment in this sector to 92.7 billion rubles.

Budget grants for capital repairs were estimated as 3 billion rubles (see B, 3, a, (1), p. 33, above).

Capital transfers of 3.9 billion rubles for working capital are the difference between total planned budget grants for expansion of working capital, 5.5 billion rubles, 152/ and grants to state farms, 1.6 billion rubles (see C, 3, a, (3), p. 56, above).

(2) Agricultural Enterprise Sector.

This entry is the sum of transfers for new fixed investment, 16.8 billion rubles; capital repairs, 3.8 billion rubles; and expansion of working capital, 1.9 billion rubles.

Budget grants for new fixed investment are equal to total new fixed investment in state agriculture less that financed from other sources. Total investment in state agriculture has been estimated at 18.8 billion rubles (see C, 3, a, (2), (a), p. 55, above). From this amount must be deducted 1 billion rubles for state farm investment under and outside the centralized investment plan (see C, 2, a, (1), (b), p. 48, above) and 1 billion rubles for state farm investment from amortization allowances. The 1 billion rubles from amortization allowances is the difference between total allowances, 2.6 billion rubles, and the portion devoted to capital repairs, 1.6 billion rubles (see C, 3, a, (1), p. 53, above). Deduction of a total of 2 billion rubles from the investment figure of 18.8 billion rubles leaves 16.8 billion rubles to be financed from budget grants.

Because it is assumed that all state farm capital repairs were financed from amortization allowances, only MTS capital repairs, estimated at 3.8 billion rubles (see C, 3, a, p. 53, above) are considered to have been financed by budget grants.

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The working capital figure is the sum of grants to state farms, 1.6 billion rubles, and grants to MTS's, 0.3 billion rubles (see C, 3, a, (3), p. 56, above).

b. Net Loans to Other Sectors.(1) Household Sector.

Household borrowing is for private housing construction. In urban areas, households borrow from the Communal Bank; in rural areas, from the Agricultural Bank.

New Agricultural Bank loans for private housing in 1956 were planned at 1.4 billion rubles out of total new loans of 6.4 billion rubles, 153/ or 22 percent of the total. For 1955, it is known that new nonhousing loans were 4.4 billion rubles. 154/ If the 1956 relationship is applied to 1955, total new loans in 1955 become 5.6 billion rubles and new housing loans 1.2 billion rubles. Repayments on housing loans in 1955, however, amounted to 330 million rubles. 155/ Thus net Agricultural Bank loans for housing were 0.9 billion rubles.

New Communal Bank housing loans in 1955 were 850 million rubles. 156/ If it is assumed that repayments were at the same rate as for the Agricultural Bank (330 out of 1,200, or 28 percent), then repayments to the Communal Bank were 240 million rubles, and its net loans were 850 less 240, or 610 million rubles. Net Communal Bank loans are therefore estimated at 0.6 billion rubles.

(2) Nonagricultural Enterprise Sector.

This entry consists of the increase in short-term loans by the State Bank, 9.5 billion rubles, and long-term loans by the Industrial and Trade Banks, 2 billion rubles.

The change in short-term loans is estimated by subtracting State Bank credit outstanding on 1 January 1955 from credit outstanding on 1 January 1956. State Bank credit outstanding on 1 January 1955 was 190 billion rubles. 157/ Credit outstanding on 1 January 1957 was reported as 243.6 billion rubles and 22.2 percent above the 1 January 1956 level. 158/ Credit outstanding on 1 January 1956 must therefore have been 200 billion rubles, indicating a 10-billion-ruble increase during 1955.

The 10-billion-ruble increase in short-term loans in 1955 went partly to agricultural enterprises and partly to nonagricultural enterprises. On 1 January 1956, out of total State Bank



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credit outstanding, 8.5 percent was devoted to agriculture and agricultural procurement. 159/ If it is assumed that agriculture alone accounted for slightly over half of the 8.5 percent, then 5 percent of bank credit outstanding may be attributed to agricultural enterprises and 95 percent to nonagricultural enterprises. If it is further assumed that the increase in short-term credit during 1955 was distributed in the same proportion as credit outstanding on 1 January 1956, then the Nonagricultural Enterprise Sector received 95 percent of the estimated 10-billion-ruble increase, or 9.5 billion rubles. This calculation leaves 5 percent, or 0.5 billion rubles, for the Agricultural Enterprise Sector.

Long-term borrowing of the Nonagricultural Enterprise Sector consists of loans from the Trade and Industrial Banks. Trade Bank loans are estimated to have increased in 1955 by 1.5 billion to 2 billion rubles on the basis of (a) a planned increase in 1954 of 1.4 billion rubles in funds available to the Bank for lending, 160/ and (b) a 1955 statement that the Bank annually granted credits amounting to "about" 2 billion rubles. 161/ Industrial Bank loans are very small. According to a 1954 Soviet statement, total loans granted during the period 1941-53 amounted to "more than 1 billion rubles." 162/ The total increase in Trade and Industrial Bank loans in 1955 is therefore estimated at 2 billion rubles.

(3) Agricultural Enterprise Sector.

Loans to the Agricultural Enterprise Sector consist of the increase in short-term loans by the State Bank, 0.5 billion rubles, and net long-term loans by the Agricultural Bank collective farms, 2.1 billion rubles. Short-term loans to the Agricultural Enterprise Sector were estimated at 0.5 billion rubles (see (2), p. 72, above). Net long-term loans of 2.1 billion rubles are the difference new loans of 4.4 billion rubles 163/ and repayments of 2.3 billion rubles. The latter is calculated from a Soviet statement that collective farms repaid only 85.8 percent of scheduled repayments of 2,685 million rubles in 1955. 164/

Net loans granted by the banking system in 1955 may be summarized as follows:

Bank	Billion Rubles			
	Household Sector	Nonagricultural Enterprise Sector	Agricultural Enterprise Sector	Total
State Bank		9.5	0.5	10.0
Agricultural Bank	0.9		2.1	3.0
Communal Bank	0.6			0.6
Trade Bank and Industrial Bank		2.0		2.0
Total	<u>1.5</u>	<u>11.5</u>	<u>2.6</u>	<u>15.6</u>

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c. Government Capital Formation.(1) Capital Repairs.

In 1956, capital repairs to health and educational facilities were planned at 2.3 billion rubles. <sup>165/</sup> On this basis it is estimated that similar outlays in 1955 were 2 billion rubles. In addition, 1 billion rubles have been added to allow for capital repairs to military facilities and equipment. Total government capital repairs are thus estimated as 3 billion rubles.

(2) New Fixed Investment.

This entry is the sum of Government Sector investment in health and education, 2.1 billion rubles, and military investment, 3 billion rubles.

Investment in health and education by the Government Sector is the sum of centrally planned and extraplan investment in schools and health facilities by republic and local authorities.\* Their investment in school construction is estimated at 0.5 billion rubles on the basis of planned school construction of 363 million rubles in 1955 by the Ministry of City and Rural Construction. <sup>166/</sup> Investment by the union-republic Ministries of Health is estimated at 0.6 billion rubles on the basis of estimated 1953 investment of 448 million rubles. <sup>167/</sup> In addition, expenditures for the acquisition of fixtures and equipment outside the centralized investment plan are estimated at 1 billion rubles on the basis of a planned 1956 outlay of 1.2 billion rubles for this purpose. <sup>168/</sup> Total Government Sector investment in health and education is therefore estimated at 2.1 billion rubles.

Government investment in the construction of airfields, barracks, and the like by the military forces is estimated notionally at 3 billion rubles out of the total explicit defense appropriation of 107.4 billion rubles.

(3) Other.

This category includes additions to gold stocks, state reserve purchases, expenditures for investment project planning

\* In addition, the Nonagricultural Enterprise Sector is estimated to have invested 2.9 billion rubles in education and health facilities attached to its establishments (see Appendix A, Table 9, p. 105, below).

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bureaus, and minor investment expenditure such as outlays for geological surveys. These expenditures are estimated at 15 billion rubles in 1955 in Appendix A, Table 9.\*

An accounting problem arises in connection with the government state reserve program. Under Soviet budget accounting practice, gross purchases for state reserves are treated as budget expenditures, and gross sales from state reserves are treated as budget revenues. Because of the complete lack of information on the magnitude of state reserve purchases and sales, however, any estimate of their size would be pure guesswork. Under these circumstances the least questionable procedure appears to be to avoid a separate estimate of state reserve purchases and to include them in a total Government Sector capital formation figure. Similarly, no allowance has been made for budget revenues resulting from sales of state reserve stocks. One effect of this procedure is to overstate investment in the end-use distribution in III, below, since sales from state reserves should be deducted from government capital formation to obtain a net figure for additions to inventories. A second effect of this procedure is to overstate "other enterprise taxes." These were computed as unspecified budget revenues (see Appendix A, Table 8\*\*) and therefore include proceeds from state reserve sales. Although these two effects are regrettable, the net result of this procedure seems to be less misleading than that of the alternative procedure of estimating state reserve sales and purchases completely arbitrarily.

d. Additions to Cash Balances.

This entry represents the portion of the budget surplus not devoted to offsetting the expansion of State Bank short-term credit. The total budget surplus was 24.8 billion rubles. 169/ Total expansion of State Bank credit was computed at 10 billion rubles (see b, (2), p. 72, above), of which 0.4 billion rubles was offset by consumer cooperative payments to the State Bank from profits (see B, 2, a, (4), p. 29, above). It is assumed that the remaining 9.6 billion rubles of State Bank credit expansion was offset by the budget surplus, in accordance with Soviet doctrine. 170/ The rest of the surplus, 15.2 billion rubles, is assumed to represent an increase in the Ministry of Finance budget account at the State Bank and thus an addition to the cash balances of the Government Sector.

e. Saving.

(See D, 2, e, p. 67, above.)

\* P. 105, below.

\*\* P. 104, below.

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f. Capital Transfers from the Household Sector.(1) Net Purchase of Government Bonds.

(See A, 3, b, p. 19, above.)

(2) Additions to Savings Deposits.

(See A, 3, b, p. 19, above.)

g. Capital Transfers from the Nonagricultural Enterprise Sector.

In 1955 it was planned that enterprises would transfer to the budget excess working capital in the amount of 5.3 billion rubles.

E. Consolidated National Accounts.

Consolidated national accounts are obtained by combining the sector accounts and eliminating mutual purchases and sales, in order to show only final products. Thus, when the same transaction is listed on the debit side of one sector's production account and on the credit side of another sector's production account, the transaction is omitted from both debits and credits in the Consolidated Production Account. The total of each consolidated account represents an important measure of Soviet economic performance. The total of the Consolidated Production Account is GNP at established prices. The total of the Consolidated Appropriation Account is national income at factor cost. The total of the Consolidated Capital Account is gross capital formation.

1. Production Account.

Account 12,\* the Consolidated Production Account, contains the sums of the corresponding entries in the sector production accounts. In order to show GNP and gross national expenditure at established prices, however, subsidies are eliminated from the credit side (where they appear in the sector production accounts) and are explicitly deducted from the debit side of the Consolidated Production Account.

a. National Income.

Consolidated national income is the sum of national income originating in the Nonagricultural Enterprise Sector, 527.2

\* Account 12 follows on p. 77.

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## Account 12

Soviet National Accounts, 1955: Production Account  
of the Consolidated National Accounts

Billion Rubles

Debit		Credit	
National income	948.0	Consumers' expenditure on goods and services	744.1
Capital consumption allowances	54.5	Government current expenditures on goods and services	279.2
Indirect taxes	326.5	Gross capital formation	262.5
Less: subsidies	47.0		
Statistical discrepancy	3.8		
Gross National Product at Established Prices	<u>1,285.8</u>	Gross National Expenditure at Established Prices	<u>1,285.8</u>

billion rubles (see B, 1, d, p. 25, above); in the Agricultural Enterprise Sector, 289.2 billion rubles (see C, 1, d, p. 42, above); and in the Government Sector, 131.6 billion rubles. National income originating in the Government Sector is the sum of wages of government employees, 105.6 billion rubles (see D, 1, a, p. 57, above); social insurance payments, 3.7 billion rubles (see D, 1, b, p. 61, above); and military subsistence, 22.3 billion rubles (see D, 1, c, p. 62, above).

b. Capital Consumption Allowances.

This entry is the sum of allowances in the Nonagricultural Enterprise Sector, 51.9 billion rubles (see B, 1, c, p. 24, above), and in the Agricultural Enterprise Sector, 2.6 billion rubles (see C, 1, c, p. 41, above).

c. Indirect Taxes.

This entry is the sum of indirect taxes paid by the Nonagricultural Enterprise Sector, 324.5 billion rubles (see B, 1, b, p. 23, above), and by the Agricultural Enterprise Sector, 2 billion rubles (see C, 1, b, p. 41, above).

d. Subsidies.

Total subsidies are the sum of subsidies to the Nonagricultural Enterprise Sector, 32 billion rubles (see B, 1, g, p. 26,

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above), and to the Agricultural Enterprise Sector, 15 billion rubles (see C, 1, f, p. 46, above).

e. Statistical Discrepancy.

The consolidated statistical discrepancy is the discrepancy in the Nonagricultural Enterprise Sector of 3.8 billion rubles (see B, 1, e, p. 25, above).

f. Consumers' Expenditure on Goods and Services.

This entry includes both money expenditures on goods and services and the receipt of goods and services as income-in-kind. It is the sum of purchases by the Household Sector from the Nonagricultural Enterprise Sector, 524.4 billion rubles; from the Agricultural Enterprise Sector, 197.4 billion rubles; and from the Government Sector (in the form of military subsistence), 22.3 billion rubles (see A, 2, b, p. 7, above).

g. Government Current Expenditure on Goods and Services.

This entry is the cost of government services (see D, 1, d, p. 64, above).

h. Gross Capital Formation.

This entry is the sum of gross capital formation in the Household Sector (new fixed investment), 9.4 billion rubles (see A, 3, a, p. 18, above); in the Nonagricultural Enterprise Sector, 176.4 billion rubles (see B, 3, a, p. 33, above); in the Agricultural Enterprise Sector, 53.6 billion rubles (see C, 3, a, p. 53, above); and in the Government Sector, 23.1 billion rubles (see D, 3, c, p. 74, above).

2. Appropriation Account.

Account 13,\* the Consolidated Appropriation Account, is compiled by combining the entries in the sector appropriation accounts according to the type of payments made, rather than according to intersectoral transactions.

a. Wages and Other Cash Household Income.

This entry is the sum of wages and other cash household income originating in the Nonagricultural Enterprise Sector,

\* Account 13 follows on p. 79.

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## Account 13

Soviet National Accounts, 1955: Appropriation Account  
of the Consolidated National Accounts

Billion Rubles

Debit		Credit	
Wages and other cash		National income	948.0
household income	574.4		
Income-in-kind	181.7		
Social insurance	26.5		
Direct taxes and related			
payments of enterprises	110.1		
Saving of enterprises	55.3		
National income at factor		National income at factor	
cost	<u>948.0</u>	cost	<u>948.0</u>

358.8 billion rubles (see B, 2, a, (1) through (5), p. 26, above); in the Agricultural Enterprise Sector, 110 billion rubles (see C, 2, a, (1) through (4), p. 48, above); and in the Government Sector, 105.6 billion rubles (see D, 1, a, p. 57, above).

b. Income-in-Kind.

This entry is the sum of income-in-kind originating in the Nonagricultural Enterprise Sector, 14.4 billion rubles (see B, 2, a, (6) and (7), p. 31, above); in the Agricultural Enterprise Sector, 145 billion rubles (see C, 2, a, (5), p. 51, above); and in the Government Sector (military subsistence), 22.3 billion rubles (see D, 1, c, p. 62, above).

c. Social Insurance.

This entry is the sum of social insurance payments by the Nonagricultural Enterprise Sector, 21.4 billion rubles (see B, 2, b, p. 31, above); the Agricultural Enterprise Sector, 1.4 billion rubles (see C, 2, b, p. 51, above); and by the Government Sector, 3.7 billion rubles (see D, 1, b, p. 61, above).

d. Direct Taxes and Related Payments of Enterprises.

This entry is the sum of all direct taxes and of payments to the banking system by cooperatives in the Nonagricultural

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Enterprise Sector, 103.2 billion rubles (see B, 2, b, p. 31, above); and of direct taxes of the Agricultural Enterprise Sector, 6.9 billion rubles (see C, 2, b, p. 51, above).

e. Saving of Enterprises.

Enterprise saving was 29.4 billion rubles in the Non-agricultural Enterprise Sector (see B, 2, c, p. 32, above) and 25.9 billion rubles in the Agricultural Enterprise Sector (see C, 2, c, p. 52, above).

3. Capital Account.

Account 14,\* the Consolidated Capital Account, is obtained by combining the sector capital accounts, with one adjustment. Saving devoted to the formation of purely monetary assets is deducted from both sides of the account in order to obtain real capital formation and saving.

a. Gross Capital Formation.

(1) Capital Repairs.

Total capital repairs are the sum of capital repairs in the Nonagricultural Enterprise Sector, 34.1 billion rubles (see B, 3, a, p. 33, above); in the Agricultural Enterprise Sector, 7.9 billion rubles (see C, 3, a, p. 53, above); and in the Government Sector, 3 billion rubles (see D, 3, c, p. 74, above).

(2) New Fixed Investment.

Total new fixed investment is the sum of investment in the Household Sector, 9.4 billion rubles (see A, 3, a, p. 18, above); in the Nonagricultural Enterprise Sector, 127 billion rubles (see B, 3, a, p. 33, above); in the Agricultural Enterprise Sector, 43 billion rubles (see C, 3, a, p. 53, above); and in the Government Sector, 5.1 billion rubles (see D, 3, c, p. 74, above).

(3) Additions to Inventories.

Additions to inventories were 15.3 billion rubles in the Nonagricultural Enterprise Sector (see B, 3, a, p. 33, above) and 2.7 billion rubles in the Agricultural Enterprise Sector (see C, 3, a, p. 53, above).

\* Account 14 follows on p. 81.



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## Account 14

Soviet National Accounts, 1955: Capital Account  
of the Consolidated National Accounts

Billion Rubles			
Debit		Credit	
Gross capital formation	262.5	Capital consumption allowances	54.5
Capital repairs	45.0	Saving	236.4
New fixed investment	184.5	Less: Addition to monetary assets	21.5
Additions to inventories	18.0		
Other	15.0		
Statistical discrepancy	6.9		
Gross capital formation	<u>269.4</u>	Gross real saving	<u>269.4</u>

(4) Other.

Other investment in the Government Sector was 15 billion rubles (see D, 3, c, p. 74, above).

b. Statistical Discrepancy.

The statistical discrepancy in the Nonagricultural Enterprise Sector was 6.9 billion rubles (see B, 3, d, p. 37, above).

c. Capital Consumption Allowances.

This entry is the sum of allowances in the Nonagricultural Enterprise Sector, 51.9 billion rubles (see B, 3, f, p. 37, above), and in the Agricultural Enterprise Sector, 2.6 billion rubles (see C, 3, d, p. 57, above).

d. Saving.

Total saving is the sum of saving in the Household Sector, 40.6 billion rubles (see A, 3, d, p. 22, above); in the Nonagricultural Enterprise Sector, 29.4 billion rubles (see B, 3, e, p. 37, above); in the Agricultural Enterprise Sector, 25.9 billion

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rubles (see C, 3, c, p. 56, above); and in the Government Sector, 140.5 billion rubles (see D, 3, e, p. 75, above).

e. Addition to Monetary Assets.

Saving devoted to the formation of cash balances, enterprise bank deposits, and receivables was 2.5 billion rubles in the Household Sector (see A, 3, c, p. 21, above); 3.8 billion rubles in the Nonagricultural Enterprise Sector (see B, 3, c, p. 36, above); and 15.2 billion rubles in the Government Sector (see D, 3, d, p. 75, above).

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III. Gross National Product by End Use.

The composition of Soviet output is revealed by the distribution of gross national product (GNP) into end-use categories of consumption, investment, defense, and administration. In A, below, GNP at established prices, as calculated in the Consolidated Production Account (see II, E, 1, p. 76, above), is distributed by end use. In B, below, the end-use distribution of GNP is adjusted to a factor-cost basis in order to reflect more closely the allocation of resources among end uses.

A. GNP at Established Prices.

GNP at established prices is classified into end-use categories by regrouping the expenditures in the Consolidated Production Account (see II, E, 1, p. 76, above). Government current expenditure on goods and services is distributed according to purpose, and military capital formation is transferred from Gross Capital Formation into Defense. Research and development outlays are classified as Investment. The components of each end-use category are shown in Table 1\* and are discussed below.

1. Consumption.

a. Consumers' expenditure on goods and services is taken directly from the Consolidated Production Account (see II, E, 1, p. 76, above).

b. Communal expenditure on goods and services for consumption is composed of government current expenditure on health and education plus total expenditure of public organizations (excluding the Communist Party). The 96.7-billion-ruble figure is the sum of wages, social insurance payments, and materials purchases incurred in the health and education activities of the government as well as all activities of trade unions and miscellaneous recreational and educational public organizations (see II, D, 1, p. 57, above). Communist Party expenditures of 2.6 billion rubles have been deducted from total expenditures of public organizations for Consumption and are classified below under Administration.

\* Table 1 follows on p. 84.

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Table 1

Distribution of Soviet Gross National Product  
at Established Prices, by End Use  
1955

End Use	Billion Rubles
1. Consumption	<u>840.8</u>
a. Consumers' expenditure on goods and services	744.1
b. Communal expenditure on goods and services	96.7
2. Investment	<u>263.5</u>
a. Gross capital formation	262.5
b. Less: Military capital formation	4.0
c. Research and development programs	5.0
3. Defense	<u>144.6</u>
a. Military procurement and operations	57.5
b. Government current purchases for defense programs	32.4
c. Military pay	28.4
d. Military subsistence	22.3
e. Military capital formation	4.0
4. Administration	<u>36.9</u>
a. General administration	12.5
b. Internal security	7.7
c. General agricultural programs	7.9
d. Communist Party	2.6
e. Other	6.2
Total	<u><u>1,285.8</u></u>

2. Investment.

From gross capital formation (see II, E, 1, p. 76, above) is deducted the sum of military capital repairs, 1 billion rubles, and military fixed investment, 3 billion rubles (see II,

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D, 3, p. 69, above). This military capital formation is classified in the defense end use. To gross capital formation is added government outlays for research and development programs (see II, D, 1, p. 57, above).

3. Defense.

The total defense end use of 144.6 billion rubles is the sum of the components indicated. Items a, b, c, and d are taken from II, D, 1, p. 57, above. Item e is from II, D, 3, p. 69, above.

The total of defense expenditures derived in this report represents total explicit expenditures for defense as reported in the budget plus an estimate of militarized internal security expenditures and a residual of expenditures from the budget category, Financing the National Economy. The total of these groups of expenditures, 144.6 billion rubles, may be compared with an alternative figure derived by costing, in some detail, estimates of Soviet military posture and activities during 1955. This latter figure, 173.4 billion rubles, however, is not strictly comparable with the estimate derived for national income purposes. 171/ Included in the larger total but not the defense estimate for this report are military pensions, payments to reserve members while on reserve duty by economic enterprises, and an estimate of military research and developmental expenditures charged to economic enterprises and the social-cultural sector of the economy.

Military pensions are treated in this report as transfer payments from the government to individuals, and the payments to reserve members while on reserve duty by economic enterprises have been included in the calculation of the economic enterprise wage bill. The financing of military research and development performed by the educational system is already included in the social-cultural vote of the budget and appears in the present accounts as communal consumption. Additionally, it is quite probable that a portion of the government purchase of research and development from economic enterprises represents military-oriented activity.

The two estimates of defense expenditures may be adjusted in the following manner:

<u>National Income Estimate</u>		<u>Cost-Derived Estimate</u>	
Total	144.6	Total	173.4
plus:		less:	
a. Military-oriented re- search and development performed by economic and social-cultural enterprises	8.0	a. Military pensions	2.9
		b. Payments to reserve members by economic enterprises	2.3
	<u>152.6</u>		<u>168.2</u>

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The resulting difference, 15.6 billion rubles, is quite small considering the uncertainties surrounding these two estimates.

4. Administration.

a. General administration expenditures are the sum of wages, social insurance payments, and materials purchases for this purpose (see II, D, 1, p. 57, above).

b. Internal security expenditures are the sum of wages and materials purchases (see II, D, 1, p. 57, above).

c. Expenditures on general agricultural programs are the sum of wages, social insurance payments, and materials purchases (see II, D, 1, p. 57, above).

d. Communist Party expenditures are the sum of wages, social insurance payments, and materials purchases (see II, D, 1, p. 57, above).

e. Miscellaneous budget expenditures were assumed (see II, D, 1, p. 57, above) to represent purchases of goods and services from the Nonagricultural Enterprise Sector. It is assumed here that these purchases were for general administrative purposes rather than for consumption, investment, or defense.

On the basis of this end-use distribution, appropriate ruble-dollar ratios may be applied to convert Soviet GNP at established prices from rubles into dollars. Preliminary ratios  indicate that 1955 Soviet GNP of 1,285.8 billion 1955 rubles was equivalent to about 146 billion 1955 US dollars.

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B. GNP at Adjusted Factor Cost.

It is desirable to adjust the end-use distribution of GNP from an established price basis to a factor-cost basis because the latter more accurately reflects the allocation of resources by purpose in the USSR. This is so primarily because of the unproportionate distribution among end uses of indirect taxes, which are included in established prices but are not payments to factors of production for services rendered. Because these indirect taxes, especially the turnover tax, fall most heavily upon consumption expenditures, their inclusion in GNP at established prices increases the relative importance of consumption in total GNP. In order to show more accurately the distribution of resources to consumption, investment, defense, and administration, it is necessary to calculate total GNP and its four end-use components in terms of factor costs -- that is, payments for resources devoted to each of these end uses. GNP at established prices is adjusted to a factor-cost basis by deducting indirect

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taxes (including imputed turnover taxes in income-in-kind) and the statistical discrepancy and by adding subsidies, which are payments to factors of production that are not included in established prices. If capital consumption allowances are deducted from GNP at adjusted factor cost, net national product or national income at adjusted factor cost is obtained. The interrelation of these income and product concepts in 1955 is shown in Table 2.

Table 2

Interrelation of Soviet Gross National Product  
and National Income Magnitudes  
1955

		Billion Rubles
	GNP at established prices	1,285.8
Less:	Indirect taxes	368.0
	Explicit turnover taxes	242.4
	Imputed turnover taxes	41.5
	Other enterprise taxes	84.1
Less:	Statistical discrepancy	3.8
Plus:	Subsidies	47.0
Equals:	GNP at adjusted factor cost	961.0
Less:	Capital consumption allowances	54.5
Equals:	Net national product or national income at adjusted factor cost	906.5

The breakdown of GNP at adjusted factor cost by end use is obtained by distributing indirect taxes, subsidies, and the statistical discrepancy among the four end uses and deducting them from (or, when appropriate, adding them to) the end-use totals at established prices. The adjustments are shown in Table 3.\*

In Table 3, turnover taxes are distributed by end use by identifying final product expenditures subject to turnover tax (column B) and, in the absence of information on tax rates on individual commodities or groups of commodities, by applying the average effective rate of taxation (column C). Both explicit turnover taxes actually collected and imputed turnover taxes included in the portion of farm household income-in-kind priced at state retail prices (which include turnover tax) must be deducted. The average effective rate of turnover taxation is determined by dividing explicit turnover tax collections by total explicit final product expenditures subject to the tax. The resulting rate of 42.85 percent in 1955 is applied to the expenditures in order to deduct the appropriate amount of turnover tax from each end use (column D).

\* Table 3 follows on p. 88.

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Table 3

Derivation of Soviet Gross National Product at Adjusted Factor Cost, by End Use  
1955

		Billion Rubles				
		A	B	C	D	E
GNP End Use and Component		GNP at Established Prices	Expenditures Subject to Turnover Tax	Turnover Tax at Effective Rate g/* 42.8% Percent of B	GNP Less Turnover Tax A - C	Other Enterprise Taxes b/
End Use	Component					
Consumption	Household state and cooperative retail purchases of goods and services		458.4			
	Farm household income-in-kind		97.0 c/			
	Forced labor subsistence		9.4			
	Materials purchases for health and education		26.1			
	Materials purchases of public organizations		4.2			
	Subtotal	840.8	597.1	255.9	584.9	49.6
Investment	Building materials		9.1 d/			
	Inventories		13.7 e/			
	Subtotal	263.5	22.8	9.7	253.8	22.1
Defense	Military subsistence		22.3			
	Petroleum products		3.1			
	Subtotal	144.6	25.4	10.9	133.7	10.5
Administration	Materials purchases		17.3 f/			
	Subtotal	36.9	17.3	7.4	29.5	1.9
	Total	1,285.8	662.6	283.9	1,001.9	84.1

\* Footnotes for Table 3 follow on p. 90.



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Table 3

Derivation of Soviet Gross National Product at Adjusted Factor Cost, by End Use  
1955  
(Continued)

							Billion Rubles
GNP End Use and Component		F	G	H	I	J	K
End Use	Component	GNP Less Indirect Taxes D - E	Statistical Discrepancy <sup>E/</sup>	Nonagricultural Subsidies <sup>F/</sup>	Explicit/ Expenditures on Products of Agricultural Origin <sup>I/</sup>	Agricultural Subsidies <sup>J/</sup>	GNP at Adjusted Factor Cost F - G + H + J
Consumption	Household state and cooperative retail purchases of goods and services				227.3 <sup>K/</sup>		
	Farm household income-in-kind				0		
	Forced labor subsistence				7.5 <sup>L/</sup>		
	Materials purchases for health and education				14.0 <sup>M/</sup>		
	Materials purchases of public organizations				0		
	Subtotal	<u>235.3</u>	<u>3.8</u>	<u>21.0</u>	<u>248.8</u>	<u>13.9</u>	<u>566.4</u>
Investment	Building materials				0		
	Inventories				1.4 <sup>N/</sup>		
	Subtotal	<u>231.7</u>	<u>0</u>	<u>10.0</u>	<u>1.4</u>	<u>0.1</u>	<u>241.8</u>
Defense	Military subsistence				17.8 <sup>O/</sup>		
	Petroleum products				0		
	Subtotal	<u>123.2</u>	<u>0</u>	<u>1.0</u>	<u>17.8</u>	<u>1.0</u>	<u>125.2</u>
Administration	Materials purchases				0		
	Subtotal	<u>27.6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>27.6</u>
	Total	<u>917.8</u>	<u>3.8</u>	<u>32.0</u>	<u>268.0</u>	<u>15.0</u>	<u>961.0</u>

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Table 3

Derivation of Soviet Gross National Product at Adjusted Factor Cost, by End Use  
1955  
(Continued)

- a. Effective rate of turnover tax =  $\frac{\text{Turnover tax collections}}{\text{Explicit expenditures subject to turnover tax}}$ . Explicit expenditures subject to turnover tax equal total final product expenditures subject to turnover tax minus imputed transactions subject to turnover tax (the portion of farm household income-in-kind priced at state retail prices). Then  $\frac{242.4}{662.6 - 97.0} = \frac{242.4}{565.6} = 42.85$  percent.
- b. Other Enterprise Taxes, totaling 84.1 billion rubles, are distributed by end use on the assumption that they were passed along equally in each ruble of explicit final product sales. Because indirect taxes of the Agricultural Enterprise Sector are negligible, sales of this sector are disregarded, and total Other Enterprise Taxes are distributed according to the distribution by end use of explicit final product sales of the Non-agricultural Enterprise Sector. The distribution of these sales is estimated in Table 4. On the basis of these calculations the percentage shares in its sales of the different end-use categories in 1955 were as follows: Consumption, 59.0; Investment, 26.3; Defense, 12.5; and Administration, 2.2. Application of these percentages to the 84.1-billion-ruble total yields the distribution shown in column E.
- c. Of total farm household income-in-kind of 145 billion rubles, 97 billion rubles is the portion priced at state retail prices and 48 billion rubles the portion priced at collective farm market prices. (See Appendix B, section 4.)
- d. Purchases of building materials by households and collective farms through state and cooperative trade. 173/
- e. Assumed equal to the increase in stocks of wholesale and retail trade organizations, 13.7 billion rubles. 174/
- f. The sum of materials purchases for General Administration (3.8), Internal Security (3.8), General Agricultural Programs (5.3), Communist Party (1.3), and half of Miscellaneous Purchases (3.1).
- g. Because the largest statistical discrepancy in the basic accounts occurs in household consumption expenditures, the entire discrepancy is deducted from the consumption end use.
- h. Of total nonagricultural subsidies of 32 billion rubles, 16 billion rubles were devoted to compensating agricultural procurement organizations for price differentials; these subsidies are therefore attributed to the consumption end use. Of the remaining 16 billion rubles, it is assumed that 5 billion rubles were paid to consumption-oriented activities, such as housing and municipal services; that 10 billion rubles were paid to investment-oriented activities, such as production of basic raw materials like timber and coal; and that 1 billion rubles were devoted to the defense end use. The last figure is a notional allowance intended to acknowledge the use of basic raw materials, the production of some of which is subsidized, in defense production. Allowance for the sale of final products to the armed forces at less than full cost of production has been made in the accounts in the entry of 32.4 billion rubles for defense-oriented research and development programs (see II, D, 1, c, (7), p. 64, above).
- i. These expenditures relate to food products only. It is assumed that expenditures on all products of agricultural origin were distributed by end use in the same proportions as those for food.
- j. Agricultural subsidies are distributed by end use in the same proportions as estimated expenditures on agricultural products in column I, where, of the total of 268 billion rubles, Consumption accounts for 92.8; Investment, 0.5; and Defense, 6.7 percent. Application of these percentages to the 15-billion-ruble total for agricultural subsidies yields the distribution in column J.
- k. Estimated at 49.5 percent of total expenditures of 459.2 billion rubles. This is the share which food purchases represented of total purchases through state and cooperative retail trade in 1955. 175/
- l. Based on the military subsistence distribution of 80 percent for food and 20 percent for clothing. 176/
- m. Arbitrarily assumed to be half of the total of 28.1 billion rubles.
- n. Assumed equal to the increase in foodstuff stocks in wholesale and retail trade and industry, 1.4 billion rubles. 177/

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Then Other Enterprise Taxes are distributed by end use (column E) on the assumption that they were passed along by enterprises equally in each ruble of explicit final product sales. The necessary distribution by end use of explicit final product sales of the Nonagricultural Enterprise Sector -- used to distribute total Other Enterprise Taxes because Other Enterprise Taxes of the Agricultural Enterprise Sector are negligible -- is calculated in Table 5.\*

In addition to adjustments for indirect taxes, Table 3\*\* contains adjustments for the statistical discrepancy in the basic GNP account\*\*\* (column G) and for nonagricultural and agricultural subsidies (columns H and J).

The resulting end-use distribution of GNP at adjusted factor cost is compared in Table 4 with the end-use distribution of GNP at established prices. This table reveals that the effect of the factor-cost adjustment is to increase the shares of investment and defense in total GNP at the expense of consumption. The factor-cost distribution more accurately reflects the pattern of Soviet resource distribution, for reasons explained above, and is therefore the more appropriate one for international comparisons of resource allocation patterns.

Table 4

Soviet Gross National Product at Established Prices  
and at Adjusted Factor Cost, by End Use  
1955

End Use	At Established Prices		At Adjusted Factor Cost	
	Billions Rubles <sup>a/</sup>	Percent of Total	Billions Rubles <sup>b/</sup>	Percent of Total
Consumption	840.8	65.4	566.4	58.9
Investment	263.5	20.5	241.8	25.2
Defense	144.6	11.2	125.2	13.0
Administration	36.9	2.9	27.6	2.9
Total	<u>1,285.8</u>	<u>100.0</u>	<u>961.0</u>	<u>100.0</u>

a. From Table 1, p. 84, above.

b. From Table 3, p. 88, above.

\* Table 5 follows on p. 92.

\*\* P. 88, above.

\*\*\* The Consolidated Production Account (Account 12, p. 77, above).

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Table 5

Distribution of Explicit Final Product Sales  
of the Soviet Nonagricultural Enterprise Sector, by End Use a/  
1955

Billion Rubles

Purchaser		Type of Purchase	Distribution by End Use					
Sector	Account		Consumption	Investment	Defense	Administration	Total	
Household	Appropriation	State and cooperative retail purchases of goods	454.2					
		Services	48.0					
		Rent of state housing	4.1					
		Forced labor subsistence	9.4					
Nonagricultural	Capital	New fixed investment		3.7				
	Capital	Gross capital formation		176.4				
Agricultural	Capital	Total purchases from Nonagricultural Enterprise Sector		40.4				
Government	Production	Health and education	28.1					
		General administration				3.8		
		Military subsistence			22.3			
		Military procurement and operations			57.5			
		Internal security					3.8	
		General agricultural programs					5.3	
		Defense programs				32.4		
		Research and development programs			5.0			
		Public organizations		4.2				1.3
		Miscellaneous						6.2
		Capital	Government capital formation		19.1	4.0		
		Total	548.0	244.6	116.2	20.4	929.2	

a. Explicit final product sales of 929.2 billion rubles are equal to total Nonagricultural Enterprise Production Account sales of 964.1 billion rubles less sales of intermediate products (sales of materials to the Agricultural Enterprise Production Account, 20.5 billion rubles) and imputed sales (imputed rent, 8.7 billion rubles, and investment-in-kind in private housing construction, 5.7 billion rubles).

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IV. National Income by Sector of Origin.

Distribution of national income by sector of origin shows the structure of the economy by measuring the contribution of each of its sectors to total national income. In this part of the report the Soviet economy has been divided into the following sectors of origin: industry, construction, agriculture, transport, communications, domestic trade, government services, and other services. In A, below, national income at factor cost, calculated at 948 billion rubles in the Consolidated Appropriation Account (see II, E, 2, p. 78, above), is distributed by sector of origin and by type of factor payment. In B, p. 101, below, national income is adjusted to remove imputed turnover taxes included in the figure for farm household income-in-kind. The result shows the distribution by sector of origin of net national product or national income at adjusted factor cost, calculated at 906.5 billion rubles in Table 2.\*

A. National Income at Factor Cost.

In Table 6,\*\* national income at factor cost is distributed by sector of origin and by type of factor payment. The total of 948 billion rubles is from the Consolidated Appropriation Account. National income was derived independently for each sector of origin, with the exception of the Other Services category. This category consists of income originated in personal services, housing, and miscellaneous services, such as foreign trade. It was not possible to estimate the wage and profit components of outlays for services and housing, and consequently they have been included with the statistical discrepancy as a residual in the last row of the table.

Income originated in each sector is divided into four components: wages and other cash household income, income-in-kind, social insurance, and profits. Because land and capital (with minor exceptions) belong to the state, these factors of production are not compensated with explicit factor payments recorded in money flows, aside from minor exceptions, such as rent of state housing and interest on bank deposits. Although the "profit motive" does not determine decisions to organize new enterprises and undertake new activities in the USSR, as it does in Western free enterprise economies, profits as reported in

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\* P. 87, above.

\*\* Table 6 follows on p. 94.

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Table 6

Soviet National Income at Factor Cost, by Sector of Origin and by Type of Factor Payment  
1955

Billion Rubles

Sector of Origin	Type of Factor Payment				Total
	Wages and Other	Income-in-	Social	Profits	
	Cash Household Income	Kind	Insurance		
Industry	186.6	0	13.4	83.5	283.5
Construction	42.0	5.7	2.1	1.0	50.8
Agriculture	107.5	145.0	1.4	33.3	287.2
Transport	50.0	0	3.0	24.0	77.0
Communications	4.4	0	0.3	1.0	5.7
Domestic trade	26.9	0	1.2	17.0	45.1
Government services	105.6	22.3	3.7	0	131.6
Other services and statistical discrepancy	49.4	8.7	1.4	7.6	67.1
<b>Total</b>	<b>572.4 a/</b>	<b>181.7</b>	<b>26.5</b>	<b>167.4</b>	<b>948.0</b>

a. This figure differs from 574.4 billion rubles, the figure for wages and other cash household income in the Consolidated Appropriation Account (see II, E, 2, p. 78, above), by 2 billion rubles, the sum of profits distributed to cooperative members, 1.5 billion rubles, and to state farm employees, 0.5 billion rubles. In this table these distributed profits are included in profits in order to show the distribution by sector of total profits, whereas in the Consolidated Appropriation Account they are included in wages and other cash household income.

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Soviet money flows do constitute a factor payment. The Soviet profit concept has elements of rent and interest because profits are calculated in relation to cost of production -- which in turn is related to the amount of fixed and working capital invested in the enterprise -- and are set at an average level or within a "normal" range, 178/ implying a notion of average rate of return.

The derivation of each figure in Table 6 is discussed below.

1. Industry.

a. Wages and Other Cash Household Income.

Total wages and social insurance payments in industry are estimated at 200 billion rubles on the basis of a study of costs in Soviet industry. 179/ The total cost of production (sebestoimost') in Soviet industry in 1955 was estimated at 690 billion rubles. This estimate was based on a large number of statements in Soviet sources regarding possible savings from reductions in sebestoimost'. For example, Kaganovich reported in 1954 that a reduction of 1 percent in sebestoimost' in state industry would result in a saving of 5 billion rubles 180/; another source stated in 1956 that a 1-percent reduction in sebestoimost' would result in a saving of nearly 7 billion rubles. 181/

On the basis of a Soviet analysis of costs, 182/ payments for labor are taken to be equal to 24.8 percent of total sebestoimost' of 690 billion rubles, or 171 billion rubles. This figure includes wages, social insurance charges, other payments (such as bonus and premium compensation to workers), and an allowance for the cost of loading, storing, and again loading finished products. In addition to this, an allowance of 7 billion rubles (1 percent of sebestoimost') is included to cover labor costs involved in loading, storing, and unloading incoming materials in factories. The resulting total of 178 billion rubles is the labor cost bill for industry at the plant level. A further addition of 22 billion rubles, however, is made to allow for wages paid by sales and supply organs of industrial ministries, higher administrative organs, and research and design organizations. This addition brings the labor cost bill in industry, including social insurance, to a total of 200 billion rubles.

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Because social insurance payments constitute 1.4 percent and wages 19.5 percent of direct production costs in Soviet industry, 183/ average social insurance payments are estimated at 1.4 divided by 19.5, or 7.2, percent of the industrial wage bill. The 200 billion rubles in total labor costs is therefore 107.2 percent of the wage bill, which thus becomes 186.6 billion rubles, leaving 13.4 billion rubles for social insurance.

b. Income-in-Kind.

None.

c. Social Insurance.

(See a, p. 95, above.)

d. Profits.

Profits in state industry have been estimated at 76.5 billion rubles. 184/ This estimate is based on the assumption that actual profits in industry in 1955 fell short of planned profits in industry by the same percentage as total profits of state enterprises fell short of planned profits in that year. Actual profits of state enterprises in 1955 were 123.7 billion rubles, 185/ or 86.3 percent of planned profits of 143.3 billion rubles. 186/ Actual profits in industry are therefore taken as 86.3 percent of planned profits of 88.7 billion rubles, 187/ or 76.5 billion rubles. Profits of producer cooperatives in 1955 were 7 billion rubles (see II, B, 2, a, (4), p. 29, above). The sum of these two items is 83.5 billion rubles.

2. Construction.a. Wages and Other Cash Household Income.

Wages are reported to constitute 40 percent 188/ of total costs in construction, estimated at 104.9 billion rubles. 189/

b. Income-in-Kind.

Income-in-kind in construction consists of investment-in-kind in private housing, in the form of labor furnished by individuals building their own houses. This item has been estimated at 5.7 billion rubles (see II, A, 3, a, (2), p. 18, above).



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c. Social Insurance.

Wages and social insurance together constitute 42 percent of total costs in construction. <sup>190/</sup> As wages alone account for 40 percent (see a, p. 96, above), social insurance payments must be 2 percent of total costs, estimated at 104.9 billion rubles. Social insurance payments are therefore estimated at 2.1 billion rubles.

d. Profits.

Profits in construction are estimated at 1 billion rubles. <sup>191/</sup>

3. Agriculture.a. Wages and Other Cash Household Income.

Total cash household income originated in the Agricultural Enterprise Sector is estimated at 110 billion rubles, the difference between total payments of agricultural enterprises to the Household Sector, 255 billion rubles, and income-in-kind, 145 billion rubles (see II, C, 2, a, p. 48, above). This cash income figure, however, includes 0.5 billion rubles of state farm profits distributed to state farm employees. In Table 6 this amount has been included in the profit column and has therefore been deducted from cash household income, leaving 109.5 billion rubles for cash household income originating in the Agricultural Enterprise Sector.

A further adjustment is required because all of the income originating in the Agricultural Enterprise Sector did not originate in agricultural activity. Farm household income from sales of farm products on the collective farm market consists of a payment for trade services as well as a payment for agricultural production services. It is assumed that compensation for trade services should be valued at a sum equal to the agricultural production income foregone by farmers who chose to travel to the markets to sell their products rather than to remain on the farm to engage in agricultural activity. On the basis of Appendix B, section 2, it is estimated that cash and in-kind earnings foregone by collective farmers selling products in the markets amounted in 1955 to 2 billion rubles. Accordingly, in Table 6, this sum is deducted from income originating in agriculture and classified as income originating in trade. Deduction of 2 billion

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rubles from total cash household income of the Agricultural Enterprise Sector of 109.5 billion rubles leaves 107.5 billion rubles for income originating in agricultural activities:

b. Income-in-Kind.

(See Appendix B, section 4.)

c. Social Insurance.

(See II, C, 2, b, p. 51, above.)

d. Profits.

Profits are the sum of profits distributed to state farm employees, 0.5 billion rubles; direct taxes, 6.9 billion rubles; and saving, 25.9 billion rubles (see II, C, 2, p. 51, above).

4. Transport.a. Wages and Other Cash Household Income.

A study of costs in transport 192/ estimates total labor cost, consisting of wages and social insurance payments, at 53 billion rubles. A social insurance charge of 6 percent of the wage bill is assumed for transport as a whole, on the basis of the 6.7-percent rate applied in sea and river transport, 193/ which is thought to be higher than the average because of the more hazardous working conditions of water transport compared to land transport. Then 53 billion rubles represents 106 percent of the wage bill, which becomes 50 billion rubles, leaving 3 billion rubles for social insurance payments.

b. Income-in-Kind.

None.

c. Social Insurance.

(See a, above.)

d. Profits.

Profits in transport are estimated at 24 billion rubles. 194/

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5. Communications.a. Wages and Other Cash Household Income.

Total revenue in communications in 1955 amounted to 8.4 billion rubles. 195/ Profits, estimated at 1 billion rubles (see d, below), are deducted to obtain total costs of 7.4 billion rubles. As wages constitute 60 percent of costs in communications, 196/ the wage bill in 1955 is estimated at 4.4 billion rubles.

b. Income-in-Kind.

None.

c. Social Insurance.

As the social insurance rate in communications is 6.1 percent of the wage bill, 197/ social insurance charges are estimated at 0.3 billion rubles.

d. Profits.

Total profit in transport and communications in 1955 was planned at 25.2 billion rubles. 198/ Deduction of profits in transport, 24 billion rubles (see 4, d, p. 98, above), leaves 1.2 billion rubles for communications. This figure has been adjusted downward to 1 billion rubles to allow for the underfulfillment of the state enterprise profit plan. 199/

6. Domestic Trade.a. Wages and Other Cash Household Income.

Total labor cost, consisting of wages and social insurance charges, in domestic trade is estimated at 26.1 billion rubles, the sum of wages in trade proper at 20.8 billion rubles, and in public dining at 5.3 billion rubles.

Labor costs for direct retail trade workers in 1955 were 9.4 billion rubles. 200/ This group numbered 1,328,100 out of a total labor force in trade (excluding public dining) of 2,937,500, or 45.2 percent. 201/ On the assumption that labor cost per worker for all workers was the same as for direct retail trade workers, the figure of 9.4 billion rubles is taken as 45.2 percent of the total labor cost, which then becomes 20.8 billion rubles.

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Labor costs for direct workers in public dining establishments of all ministries were 4.5 billion rubles. 202/ In establishments of the Ministry of Trade, direct workers were 84.2 percent of the total labor force. 203/ On the assumptions that labor cost per worker was the same for indirect workers as for direct workers and that direct labor was the same share of the total in other trade organizations as in the Ministry of Trade, 4.5 billion rubles was taken as 84.2 percent of the total labor cost, which is therefore estimated at 5.3 billion rubles.

The social insurance charge in trade is 4.8 percent of the wage bill. 204/ Consequently, total labor costs of 26.1 billion rubles are 104.8 percent of the wage bill, which is therefore estimated at 24.9 billion rubles, leaving 1.2 billion rubles for social insurance.

To the wage bill of 24.9 billion rubles is added 2 billion rubles for trade income originating in the Agricultural Enterprise Sector (see 3, a, p. 97, above).

b. Income-in-Kind.

None.

c. Social Insurance.

(See a, p. 99, above.)

d. Profits.

This entry is the sum of profits of the Ministry of Trade, 10.2 billion rubles; workers' supply organizations, 1.4 billion rubles; and consumer cooperatives, 5.4 billion rubles. 205/

7. Government Services.a. Wages and Other Cash Household Income.

(See II, D, 1, a, p. 51, above.)

b. Income-in-Kind.

This entry consists of military subsistence (see II, D, 1, c, p. 62, above).

c. Social Insurance.

(See II, D, 1, b, p. 61, above.)

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d. Profits.

None.

8. Other Services and Statistical Discrepancy.a. Wages and Other Cash Household Income.

This entry is a residual equal to the difference between the total and the sum of entries for the preceding seven sectors. The total, 572.4 billion rubles, is equal to total cash household income, 574.4 billion rubles (see II, E, 2, a, p. 78, above), less profits distributed to cooperative members, 1.5 billion rubles, and to state farm employees, 0.5 billion rubles. In Table 6 these distributed profits are included in the profit column.

b. Income-in-Kind.

Income-in-kind in services consists of imputed rent of 8.7 billion rubles (see II, A, 2, h, p. 15, above).

c. Social Insurance.

This entry is a residual equal to the difference between total payments, 26.5 billion rubles, and the sum of payments by the seven preceding sectors, 25.1 billion rubles.

d. Profits.

This entry is the difference between total profits, 167.4 billion rubles, and the sum of profits in the preceding seven sectors, 159.8 billion rubles. Total profits are the sum of direct taxes and related payments, 110.1 billion rubles (see II, E, 2, p. 78, above); saving of enterprises, 55.3 billion rubles (see II, E, 2, p. 78, above); and profits distributed to cooperative members, 1.5 billion rubles (see II, B, 2, p. 26, above) and to state farm employees, 0.5 billion rubles (see II, C, 2, a, p. 48, above).

B. National Income at Adjusted Factor Cost.

In order to show national income and its sector distribution on the same adjusted factor cost basis as GNP, it is necessary to remove imputed turnover taxes from national income at original factor cost. These imputed turnover taxes are included in farm household income-in-kind (145 billion rubles)

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because it was valued in part (48 billion rubles) at collective farm market prices, which do not include turnover tax, and in part (97 billion rubles) at state retail prices, which do include turnover tax (see Appendix B, section 4). In Table 3\* the average effective rate of the turnover tax was calculated at 42.85 percent in 1955. At this rate, 41.5 billion rubles of the 97 billion rubles priced at state retail prices constitute imputed turnover taxes. This sum must be deducted from the figures in Table 6 for income originated in agriculture, 287.2 billion rubles, and total national income at original factor cost, 948 billion rubles.

The results of this adjustment are shown in Table 7, which presents the distribution by sector of origin of national income at adjusted factor cost. This table reveals that in 1955 about 37 percent of Soviet national income originated in industry and construction; 27 percent in agriculture; 9 percent in transport and communications; and the remaining 27 percent in trade, government services, and other services.

Table 7

Soviet National Income at Adjusted Factor Cost  
by Sector of Origin a/  
1955

Sector	Billion Rubles	Percent of Total
Industry	283.5	31.3
Construction	50.8	5.6
Agriculture	245.7	27.1
Transport	77.0	8.5
Communications	5.7	0.6
Domestic trade	45.1	5.0
Government services	131.6	14.5
Other services and statistical discrepancy	67.1	7.4
Total	<u>906.5</u>	<u>100.0</u>

a. National income at adjusted factor cost in this table differs from national income at original factor cost in Table 6 (p. 94, above) by the amount of imputed turnover taxes included in farm household income-in-kind, 41.5 billion rubles. This sum has been deducted from the agriculture and total figures in Table 6 to derive this table.

\* P. 88, above.

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## APPENDIX A

SOVIET NATIONAL ACCOUNTS, 1955:  
CLASSIFICATION OF BUDGET REVENUES AND EXPENDITURES

The purposes of this appendix are to show how Soviet budget revenues and expenditures are classified in the national accounts and to derive certain national accounts entries as budget residuals. In Tables 8\* and 9,\*\* respectively, the total amount of each budget revenue and expenditure item is distributed among the corresponding entries in the accounts of the Government Sector, where the sources and methodology for most of these entries are discussed (see II, D, p. 57, above). The remaining entries are derived here as residuals representing the undistributed portions of the corresponding budget items.

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\* Table 8 follows on p. 104.

\*\* Table 9 follows on p. 105.

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Table 8

## Soviet National Accounts, 1955: Classification of Budget Revenues

Billion Rubles				
National Accounts Classification				
Budget Item	Amount	Government Sector Account	Entry	Amount
Turnover tax	242.4	Appropriation	Taxes on enterprises (turnover taxes)	242.4
Profits tax	102.8	Appropriation	Taxes on enterprises (profits taxes)	97.5
		Capital	Capital transfers from Nonagricultural Enterprise Sector	5.3
Taxation on population	48.3	Appropriation	Taxes on households	48.3
State loans	36.5	Capital	Capital transfers from Household Sector	
			Net purchase of government bonds <u>a/</u>	31.2
			Additions to savings deposits	5.3
Social insurance receipts	26.5	Appropriation	Receipts from own sector	3.7
			Social insurance	22.8
MIS revenue	6.2	Appropriation	Transfers to Agricultural Enterprise Sector (grants to cover losses) <u>b/</u>	6.2
Income taxes on enterprises and organizations	12.4	Appropriation	Taxes on enterprises (income taxes)	11.5
			Taxes on enterprises (other enterprise taxes)	0.9
Local taxes and fees	7.8	Appropriation	Taxes on households <u>c/</u>	3.9
			Taxes on enterprises (other enterprise taxes) <u>c/</u>	3.9
Other revenues	81.4	Appropriation	Taxes on households <u>d/</u>	2.1
			Taxes on enterprises (other enterprise taxes) <u>e/</u>	79.3
Total	564.3			564.3

- a. Estimated retirement of state loans is deducted from gross bond purchases to obtain net bond purchases.  
b. MIS revenue is deducted from MIS noncapital expenditures to obtain the current deficit of the MIS's, which is covered by a subsidy from the Government Sector to the Agricultural Enterprise Sector.  
c. It is assumed that half of local taxes and fees was paid by households and half by enterprises.  
d. See II, D, 2, g, (1), p. 68, above.  
e. It is assumed that the residual of 79.3 billion rubles represents taxes, fees, and other payments to the Government Sector by the Nonagricultural and Agricultural Enterprise Sectors.



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Table 9

## Soviet National Accounts, 1955: Classification of Budget Expenditures

		Billion Rubles				
		National Accounts Classification				
Budget Item	Amount	Government Sector Account	Entry	Amount		
Financing the national economy	232.7 a/*	Capital	Capital transfers to other sectors			
			Nonagricultural Enterprise Sector	96.7		
				Agricultural Enterprise Sector	22.5	
		Production		Government capital formation (other)	15.0	
				Wages of government civilian employees (general agricultural programs)	2.5	
				Social insurance	0.1	
				Purchases from Nonagricultural Enterprise Sector		
				General agricultural programs	5.3	
				Defense programs	32.4	
				Research and development programs	5.0	
		Appropriation		Transfers to Nonagricultural Enterprise Sector	32.0	
				Transfers to Agricultural Enterprise Sector (grants to cover losses)	21.2	
		Social-cultural measures	147.2	Production	Wages of government civilian employees (health and education)	59.5
					Purchases from Nonagricultural Enterprise Sector (health and education purchases)	28.1
	Social insurance			3.0		
Appropriation	Transfers to Household Sector					
	Pensions			42.9		
	Stipends			6.7		
Capital				Government capital formation		
				Capital repairs	2.0	
				New fixed investment	2.1	
				Capital transfers to Nonagricultural Enterprise Sector	2.9	

\* Footnotes for Table 9 follow on p. 107.

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Table 9

Soviet National Accounts, 1955: Classification of Budget Expenditures  
(Continued)

				Billion Rubles
National Accounts Classification				
Budget Item	Amount	Government Sector Account	Entry	Amount
Administration	12.5	Production	Wages of government civilian employees (general administration)	8.3
			Social insurance	0.4
Defense	107.4	Production	Purchases from Nonagricultural Enterprise Sector (general administration)	3.8
			Military pay	23.0
		Purchases from Nonagricultural Enterprise Sector	Military subsistence	20.0
			Military procurement and operations	57.5
			Pensions	2.9
		Appropriation Capital	Government capital formation	
			Capital repairs	1.0
New fixed investment	3.0			
Loan service to population	12.2	Appropriation Capital	Transfers to Household Sector (interest)	5.9
Other expenditures	27.5	Production	Capital transfers from Household Sector (net purchase of government bonds) b/	6.3
			Wages of government civilian employees (internal security)	3.9
		Military pay c/	5.4	
		Military subsistence d/	2.3	
		Purchases from Nonagricultural Enterprise Sector (internal security)	3.8	
		Appropriation Capital	Transfers to Household Sector (interest) e/	1.0
Production	Net loans to other sectors f/	4.9		
	Purchases from Nonagricultural Enterprise Sector (miscellaneous) g/	6.2		
<b>Total</b>	<b>539.5</b>			<b>539.5</b>

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Table 9

Soviet National Accounts, 1955: Classification of Budget Expenditures  
(Continued)

a. The distribution by national accounts entries of total expenditures in the budget category Financing the National Economy is explained as follows:

From total budget expenditures for Financing the National Economy of 232.7 billion rubles, 206/ capital transfers to the Nonagricultural Enterprise Sector of 96.7 billion rubles and total expenditures for state agriculture of 51.6 billion rubles have been deducted to obtain residual outlays of 84.4 billion rubles.

Capital transfers of 96.7 billion rubles to the Nonagricultural Enterprise Sector from the budget category Financing the National Economy are the difference between total capital transfers to the sector, 99.6 billion rubles (see II, D, 3, a, p. 69, above), and capital transfers from budget category Social-Cultural Measures, 2.9 billion rubles. Total new fixed investment in social-cultural facilities is estimated at 5 billion rubles in 1955. Of this total, 2.1 billion rubles is estimated to have been invested by the Government Sector itself (see II, D, 3, c, p. 74, above), leaving 2.9 billion rubles for investment by the Nonagricultural Enterprise Sector in social-cultural facilities attached to its establishments.

Budget expenditures to state agriculture have been estimated at 51.6 billion rubles (see II, D, 1, a, (1), (d), p. 60, above).

The remainder of 84.4 billion rubles in the category Financing the National Economy was spent for reimbursements for price differentials, grants to cover losses, research and development outlays, government capital formation, and atomic energy and other defense-oriented programs. The distribution of the 84.4 billion ruble total among these uses has been estimated, more or less arbitrarily, as follows:

Budget grants to procurement organizations to reimburse them for price differentials have been estimated at 16 billion rubles in 1955. 217/ In addition, budget appropriations appear to be necessary to reimburse foreign trade organizations for bookkeeping losses resulting from differences between Soviet internal prices and international prices. 208/ To allow for this type of grant, a token allowance of 1 billion rubles has been added to the 16 billion rubles above, raising the total price differential reimbursement figure to 17 billion rubles.

On the basis of evidence in Soviet journals concerning losses in Soviet industry, 209/ it is estimated that, in addition to losses covered by ministerial profit redistributions, there were losses of about 15 billion rubles in 1955 which were covered by subsidy grants from the budget.

Several types of research and development outlays are financed from the budget as operational expenditures. These include expenditures for "mastering the production of new products" and outlays for technical improvements and inventions. 210/ These expenditures, estimated to be 5 billion rubles, are considered in this report as services performed for the Government Sector by the Nonagricultural Enterprise Sector and are classified in the Government Production Account as current purchases by the former from the latter.

It is assumed that government capital formation, in the form of additions to state reserves and the gold stock, investment planning outlays, and geological survey expenditures, amounted to about 15 billion rubles.

It is assumed that the remaining 32.4 billion rubles have been devoted to atomic energy programs and other defense-oriented development activities. These expenditures are classified as current purchases of goods and services by the Government Sector from the Nonagricultural Enterprise Sector.

b. Estimated retirement of state loans is deducted from gross bond purchases to obtain net bond purchases.

c. Pay of militarized internal security forces, which is classified as military pay.

d. Subsistence of militarized internal security forces, which is classified as military subsistence.

e. Estimated interest on savings deposits of the population. This is paid to households by the savings banks, which in turn receive budget funds in the form of interest on their investments in the state loan.

f. Estimated as the difference between the total increase in long-term bank credit and loan funds available to the long-term credit banks from other sources. The total increase in credit of the Agricultural, Industrial, Trade, and Communal Banks was 5.6 billion rubles. Of this amount, 0.7 billion rubles were covered by payments of producer cooperatives to the Trade Bank (see II, B, 2, a, (4), p. 29, above).

g. It is assumed that the unspecified residual of 6.2 billion rubles represents current purchases of goods and services from the Nonagricultural Enterprise Sector.

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## APPENDIX B

SOVIET NATIONAL ACCOUNTS, 1955: AGRICULTURAL INCOME AND OUTLAY

In this appendix the incomes and outlays of the principal agricultural producers -- collective farms, state farms, and farm households -- are analyzed in detail and various entries in the accounts of the Agricultural Enterprise Sector (see II, C, p. 37, above) are estimated. Collective farm expenditures are discussed in 1, below; farm household sales in 2, p. 113, below; state farm income and outlay in 3, p. 118, below; and farm household income-in-kind in 4, p. 121, below.

1. Distribution of Outlays from Collective Farms' Money Income.

In Table 10\* the distribution of outlays by collective farms from their money income in 1955 is estimated. The individual entries, which follow the system used in collective farm accounting, 211/ vary considerably in their precision and reliability as a result of differences in the amount and in the applicability of information available for the different entries. Lines (2), Repayments of Long-Term Loans, and (3), Deductions to Indivisible Funds, are the only items for which exact figures were available from Soviet sources. Lines (1), (4), and (6) -- Taxes, Collections, and Insurance Premiums; Deductions to Social-Cultural Funds; and Administrative-Economic Expenditures, respectively -- are estimates based on indirect information. Because the magnitude of these three entries is relatively small, however, probable errors in estimation are not considered serious. The most significant item, both in magnitude and in impact upon the residual entry, is line (7), Cash Labor-Day Payments. The accuracy of this important but necessarily rough estimate primarily determines the reliability of the residual entry in line (5) for production expenditures.

a. Total Money Income.

--

50X1

b. Money Outlay.

Total money income is estimated to have distributed by type of outlay as follows:

(1) Taxes, Collections, and Insurance Premiums.

\* Table 10 follows on p. 110.

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(a) Income Taxes.

(See II, D, 2, g, (2), (b), 68, above.)

Table 10

Distribution of Outlays  
from the Money Income of Soviet Collective Farms  
1955

	Billion Rubles
a. Total money income	<u>75.6</u>
b. Money outlay	
(1) Taxes, collections, and insurance premiums	8.4
(a) Income taxes	6.4
(b) Indirect taxes	1.0
(c) Insurance premiums	1.0
(2) Repayments of long-term loans	2.3
(3) Deductions to indivisible funds	16.5
(4) Deductions to social-cultural funds	1.1
(a) Transfer payments	0.8
(b) Fixed investment	0.3
(5) Production expenditures	16.3
(a) Payment for work of MTS's	1.2
(b) Payments to hired non- construction workers and specialists	1.2
(c) Additions to inventories	0.3
(d) Materials for current operations	13.6
(6) Administrative-economic expenditures	1.0
(a) Wages of administrative- management personnel	0.8
(b) Office supplies, travel allow- ances, and the like	0.2
(7) Cash labor-day payments	30.0
Total	<u>75.6</u>

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(b) Indirect Taxes.

Only a somewhat arbitrary guess is possible for this category. Included are taxes on the sale of timber, fines for under-fulfilling the livestock plan, collective farm market fees, and the like. In all, 1 billion rubles seems a reasonable estimate.

(c) Insurance Premiums.

in an unpublished paper, cites indemnity payments to collective farms of the RSFSR alone of 0.740 billion rubles in 1955 in source 213/. On this evidence, it seems reasonable to assume that total insurance indemnities for crop damage, cattle losses, and the like, approximated 1 billion rubles. It is assumed that insurance premium payments were equal to indemnities.

50X1

(2) Repayments of Long-Term Loans.

Repayments of long-term loans were 85.8 percent of the planned goal of 2.7 billion rubles, or 2.3 billion rubles. 214/

(3) Deductions to Indivisible Funds.

Deductions to indivisible funds represent the amount allocated for investment purposes from 1955 income, not the amount of investment accomplished by collective farms during 1955. Part of the deductions to indivisible funds from 1955 income was used to pay for the completion of investment projects begun before 1955, part was spent for investment undertaken and completed in 1955, and part was set aside for investment in 1956. Deductions to indivisible funds from 1955 income were officially reported at 16.5 billion rubles. 215/

(4) Deductions to Social-Cultural Funds.

The Model Charter of the Agricultural Artel states that these deductions shall not exceed 2 percent of collective farm money income. 216/ In view of the traditional subordination of consumption-oriented outlays to production-oriented outlays, it is assumed that 1.5 percent of money income was allocated to social-cultural funds in 1955. The distribution of the resulting 1.1 billion rubles between transfer payments to aged and disabled members of the farms, 0.8 billion rubles, and investment in social-cultural facilities, 0.3 billion rubles, is discussed in II, C, 2, a, (3), p. 50, above.

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(5) Production Expenditures.

The total of 16.3 billion rubles is a residual equal to the difference between total outlay, 75.6 billion rubles, and the sum of the other six main entries, 59.3 billion rubles.

(a) Payment for Work of MTS's.

(See II, C, 1, e, (2), (a), p. 43, above.)

(b) Payments to Hired Nonconstruction Workers and Specialists.

In 1955, collective farms spent 2.4 billion rubles for hired construction labor 217/; these payments are made from the indivisible fund. In all probability these investment expenditures for labor represent the bulk of all collective farm expenditures for hired labor, for at least two reasons. First, because the heavy agricultural machinery used on collective farms is owned and maintained by MTS's, collective farms use less skilled labor than state farms. Second, in order to allocate their meager cash resources as thriftily as possible, collective farms are more likely to use available funds for hiring construction labor than for hiring labor for current operations, in view of the large labor supply resident on collective farms. No information is available on the amount of payments to visiting hired specialists, such as agronomists and veterinarians, or to seasonal harvest hands. In order, however, to make some allowance for hired nonconstruction labor, it is assumed that collective farms spent for this purpose about one-half of their outlay for hired construction labor, or approximately 1.2 billion rubles.

(c) Additions to Inventories.

(See II, C, 3, a, p. 53, above.)

(d) Materials for Current Operations.

This category is a residual representing the difference between total estimated production expenditures, 16.3 billion rubles, and the sum of expenditures for hired nonconstruction labor, money payments to MTS's, and additions to inventories, 2.7 billion rubles. It is estimated (see II, C, 1, a, (3), p. 40, above) that, of total materials purchases for current operations of 13.6 billion rubles, 3.4 billion rubles were purchased within the Agricultural Enterprise Sector and 10.2 billion rubles were purchased from the Nonagricultural Enterprise Sector.

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(6) Administrative-Economic Expenditures.

By statute this category of expenditure is not to exceed 2 percent of total collective farm money incomes. 218/ Miss Nimitz of the RAND Corporation points out in an unpublished paper that scattered postwar evidence indicates that actual administrative expenditures have been somewhat less. Therefore, it is assumed that administrative-economic expenditures in 1955 were about 1 billion rubles, or slightly less than 1.5 percent of total outlays. Arbitrarily, 0.8 billion rubles of this sum are allocated to administrative wages and the balance to office supplies, travel allowances, and the like.

(7) Labor-Day Payments.

A Soviet statement published in January 1956 asserts that "many" collective farms in the RSFSR distribute up to 40 percent of gross money income as cash labor-day payments. 219/ It seems certain that this 40-percent share represents the achievement of the more profitable areas of the RSFSR. At the same time, the RSFSR, predominantly a grain-farming region, lags behind the average of the rest of the USSR in agricultural prosperity. Therefore, 40 percent of total collective farm money income of 75.6 billion rubles in 1955, or 30 billion rubles, appears a reasonable approximate estimate for total cash labor-day payments. In view of official statements about increases in recent years in cash labor-day payments, which in 1955 were 30 percent greater than in 1954 and 94 percent greater than in 1952, 220/ a much smaller figure for 1955 than 30 billion rubles would render this compensation implausibly low in 1954 and 1952. Competing outlays from the money incomes of collective farms -- especially investments -- appear not to have increased in recent years on a scale that would absorb what would remain if cash labor-day payments were smaller. On the other hand, a surprisingly low level of labor-day payments is reported in case studies in Sergeyev's extensive monograph. 221/ Consequently, whereas the 40-percent share appears a reasonable estimate, it is by no means conclusive.

2. Farm Household Sales and Market Fees.

This portion of the appendix has two objectives -- to derive estimates of farm household sales of farm products and to obtain an estimate of collective farm market fees paid by collective farmers.

a. Farm Household Sales.

In 1955, sales of farm products were the single most important source of money income of rural farm households. The other major source, cash labor-day payments to collective farmers, has been estimated in section 1 of this appendix. Wage incomes in state agriculture have been discussed

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in detail in II, C, 2, a, p. 48, above. The remaining source of farm household money income, earnings from labor services rendered outside agriculture on a seasonal or temporary basis, cannot be estimated, because of the complete absence of data.

In the following discussion, farm households are divided into rural and urban households. The former group includes collective farmers and also the private plot activity of state farmers, MTS workers, and other rural residents who are not collective farmers. The latter group includes the private plot activity of urban workers and employees.

In Table 11 the four types of sales by farm households are listed and summed to obtain total gross income from sales. Each type of sale is discussed in detail below.

Table 11

Farm Household Sales of Farm Products in the USSR  
1955

Type of Sale	Billion Rubles		
	Rural Households	Urban Households	Total
Collective farm market sales	36.0	3.9	39.9
Sales to state procurement organizations	3.0	1.0	4.0
Commission sales	1.6	0	1.6
Sales of livestock to collective farms	1.2	0	1.2
Total	<u>41.8</u>	<u>4.9</u>	<u>46.7</u>

(1) Collective Farm Market Sales.

In the absence of data on total rural collective farm market sales, only sales on the urban collective farm market are considered in the estimate of farm household income from collective farm market sales. Sales on the rural market by farm households to other farm households are excluded from both debits and credits in the Household Appropriation Account (see II, A, 2, p. 7, above). The commodities involved in such rural sales are not, however, excluded from the estimate of total consumption. Because no allowance

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is made for their sale in the distribution of gross output in 4, p. 121, below, they are assumed to have remained in the possession of the households which produced these commodities or received them as in-kind labor-day payments and therefore to have been consumed as income-in-kind. The assumption that these commodities were consumed as income-in-kind instead of being sold to other rural households has only a limited effect on the estimate of total consumption. This effect consists of the possible difference between the prices imputed to these commodities in the estimate of income-in-kind and the prices at which these commodities were actually sold on the rural collective farm market. The impact of this difference on the estimates of total consumption and of income originated in agriculture is considered to be very small.

Total urban collective farm market sales in 1955 amounted to 48.9 billion rubles. 222/ To obtain sales by farm households, sales by collective farms must be deducted. It was reported by a Soviet source that receipts of collective farms from "collective farm trade" were 15.6 billion rubles. 223/ The author is not explicit on the composition of this trade, but it seems probable that "collective farm trade" refers to sales by collective farms at free prices, in and outside the collective farm markets, of all agricultural products except animals on the hoof, which farms are not generally permitted to sell to individuals. A leading authority on Soviet agriculture, Dr. Naum Jasny of Washington, D.C., has reported that collective farm receipts from "collective farm trade" must include not only sales on the urban collective farm market but also sales on the rural collective farm market and direct sales to urban institutions outside the urban collective farm market. This interpretation results partly from the logical necessity of accounting somewhere for sales by collective farms on the rural market and their direct sales to institutions and partly from knowledge of collective farmers' incomes from free market trade in earlier years. Deduction of the entire 15.6 billion rubles of "collective farm trade" from the urban collective farm market total of 48.9 billion rubles would leave a residual for farm household sales that seems too small in comparison with previous years. Some indication of the importance of rural sales is provided by information for 1940, when urban collective farm market sales were 29.2 billion rubles and rural collective farm market sales 11.8 billion rubles. 224/ Although no precise estimate can be made for 1955 in the absence of specific evidence, it appears plausible to assume that free market sales in rural areas amounted to perhaps one-third of "collective farm trade," or approximately 5 billion rubles in 1955. If this assumption is made, the free market sales by collective farms in urban areas become 10.6 billion rubles. Charging 1.6 billion of this 10.6 billion rubles to direct sales to institutions by collective farms which go unrecorded in official estimates of collective farm market turnover (see II, C, 1, e, (2), (b), p. 44, above) leaves 9 billion rubles for the sales of collective farms on urban collective farm markets. Deduction

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of this latter sum from total urban collective farm market sales of 48.9 billion rubles leaves 39.9 billion rubles for sales by farm households.

Total household sales must then be distributed between rural and urban farm households. It is assumed that urban plots contributed 25 percent of total private plot production, on the basis of certain key indicators of the relative importance of urban plots in total private plot activity. In 1955, urban plots accounted for 27.5 percent of private plot sown area, 33.1 percent of privately owned large-horn cattle, 36.1 percent of privately owned cows, and 16.1 percent of privately owned pigs. 225/ Soviet estimates indicate that urban private plots furnish one-fourth of the urban population's consumption of potatoes and one-third of its meat. 226/ These data on the sources of urban food supply confirm the generally held opinion that urban plot owners retain for their own use most of what they produce, marketing only a small share of their total output. Although a precise estimate is impossible, it appears that the share of urban plot owners in total urban collective farm market sales is minor. Consequently, an estimate of 10 percent of total sales seems a plausible order of magnitude. Deduction of 10 percent, or 3.9 billion rubles, from total household sales on urban collective farm markets leaves 36 billion rubles for rural households.

(2) Sales to State Procurement Organizations.

These sales include obligatory deliveries, contract sales, and above-quota state purchases but exclude commission sales to consumer cooperatives. According to a listing of the types of procurements in 1955, 227/ collective farmers were required to make obligatory deliveries of potatoes and various livestock products. Provision was also made for the sale of some commodities at state purchase prices, but in all probability obligatory deliveries far exceeded the latter in volume, for collective farmers prefer to sell their surplus at the higher prices offered on the collective farm market. Sales to state procurement organizations by collective farmers are estimated at 3 billion rubles, the difference between total sales to procurement organizations by collective farms and collective farmers, 55.3 billion rubles, and estimated sales by collective farms, 52.3 billion rubles.

In 1955 the total state procurement bill for sales by collective farms and farmers was 29 billion rubles greater than in 1952, 228/ when, according to Khrushchev's secret speech at the 20th Party Congress, 229/ it was 26.3 billion rubles. The bill in 1955 was therefore 55.3 billion rubles.

According to Bochkov, the income of collective farms from obligatory deliveries, contract sales, and sales at purchase prices and at above-purchase prices to state and cooperative organizations totaled

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55.2 billion rubles in 1955. 230/ This figure, however, probably includes commission sales to cooperatives, which are not included in the total procurement bill of 55.3 billion rubles calculated above. Commission sales must therefore be deducted in order to obtain the share of the collective farms of the 55.3-billion-ruble total procurement bill.

Commission sales by collective farms may be calculated from data in the Soviet handbook of trade statistics, which lists a 14-item breakdown of the products included in commission sales, the total quantity of each product, and the quantity sold by collective farms. 231/ The collective farms' share for each product was applied to the handbook's 15-product breakdown of the ruble value of sales, 232/ by allowing collective farms the same percentage for the additional item "other fats" as they had for butter in the 14-product quantity distribution. The result of this calculation is a total of 3.2 billion rubles for commission sales by collective farms, constituting 65.3 percent of total commission sales of 4.9 billion rubles. 233/

This value of sales, however, includes the commission of the cooperatives, which must be deducted to obtain the return to the collective farms. The total commission on 4.9 billion rubles was reported as 0.4 billion rubles. 234/ On the assumption that collective farms' share of the total commission was the same as their share of total commission sales, or 65.3 percent, 0.3 billion rubles are deducted from the 3.2 billion rubles of commission sales by collective farms to obtain a net return of 2.9 billion rubles.

Deduction of 2.9 billion rubles from the collective farm income of 55.2 billion rubles from sales to state and cooperative organizations leaves 52.3 billion rubles for the share of this total which was paid out of the state procurement bill of 55.3 billion rubles. If collective farms received 52.3 billion rubles of a total of 55.3 billion rubles, collective farmers then received 3 billion rubles.

It was estimated above that urban plots account for 25 percent of plot production and rural plots 75 percent. Accordingly, it is assumed that urban households made deliveries worth one-third of those from rural plots, or 1 billion rubles.

### (3) Commission Sales.

It was estimated above that collective farms received 2.9 billion rubles of the 4.5 billion rubles paid by cooperatives after deducting their commission of 0.4 billion rubles from total sales of 4.9 billion rubles. This leaves 1.6 billion rubles for payments to collective farmers.

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(4) Sales of Livestock to Collective Farms.

It is well-known practice for collective and state farms to purchase privately owned livestock in order to build up their herds. By far the greater share of these purchases is made by collective farms from collective farmers, who must observe legal limits on the number of animals in their possession. This report assumes, therefore, that purchases by state farms and sales by urban farm households were negligible. Livestock sales by collective farmers to collective farms have been estimated at 1.2 billion rubles (see II, C, 1, e, (2), (a), p. 43, above).

b. Collective Farm Market Fees.

Daily fees levied on sellers in the collective farm markets vary with the space used to conduct sales. Sales from trucks are taxed at 10 rubles per day, from wagons at 5 rubles, and from tables at 1 to 2 rubles; sales of cattle are taxed at 3 to 5 rubles per head. <sup>235/</sup> For the most part, collective farms sell from truck and wagon beds and pay the largest unit fees, whereas collective farmers, selling from small counters and even the ground, pay smaller fees. It might therefore be assumed that fee payments by collective farms and farm households were roughly equal, even though collective farms are responsible for only 20 percent of sales on the urban collective farm market.

No precise estimate of fee payments is possible with available data, but some approximation may be obtained from Mikoyan's 1953 statement that half a million collective farmers went to the collective farm markets every day of the year. <sup>236/</sup> If it is assumed that each farmer paid 2 rubles per day in market fees, total fees would be a million rubles a day, or perhaps 0.3 billion rubles per year.

3. Income and Outlay of State Farms.

The purpose of this section of the appendix is to derive state farms' materials purchases from the Nonagricultural Enterprise Sector as a residual calculation on the outlay side of their income-outlay statement. The income-outlay statement in Table 12\* therefore shows only their income from sales and subsidies and the outlays made from these funds; it excludes both budget grants for capital purposes and the expenditures made with these grants.

a. Sales.

Total sales of state farms, both within and outside the Agricultural Enterprise Sector, were estimated at 23.1 billion rubles (see II, C, 1, e, (2), (a), p. 43, above).

\* Table 12 follows on p. 119.

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Table 12

Income and Outlay of Soviet State Farms a/  
1955

		Billion Rubles	
Income		Outlay	
Sales	23.1	Basic wages	15.5
Subsidies for Operations	2.0	Social insurance	0.7
		Materials for operations	4.9
		Materials for capital	
		repairs	0.6
		New fixed investment	1.0
		Indirect taxes	0.4
		Profits	2.0
 Total	 <u>25.1</u>	 Total	 <u>25.1</u>

a. Excluding capital grants from the budget and capital expenditures made with these grants.

b. Subsidies for Operations.

Only a tenuous estimate is possible for this item. Explicit Soviet data for total subsidies to state farms have not been published in the postwar period. Scattered and indirect information on subsidies of state farms of the All-Union Ministry of State Farms is available, notably in the annual Soviet budget announcements. Although the data sometimes mention the profits and losses of farms of this ministry, it is not always clear whether the figures refer to gross or net profits and losses.

Perhaps the most relevant information for 1955 is the statement that "losses" of state farms of the All-Union Ministry of State Farms amounted to nearly 2 billion rubles. 237/ These "losses" were not equal to subsidies, however, if, as regulations specify, some of the profits of the more successful state farms were redistributed to offset some of the losses of other farms. 238/ If subsidies to the All-Union Ministry of State Farms were therefore something less than 2 billion rubles, it remains to estimate subsidies to state farms (and subsidiary agricultural enterprises) of other ministries. About all that is known about the latter point is that state farms of the All-Union Ministry of the Food Industry, most of which raise the valuable sugar beet crop, are

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said to be rather profitable enterprises. 239/ State farms of the All-Union Ministry of State Farms include three-fourths of all state farms. 240/ On the assumption that other state farms, accounting for only one-fourth of the total, required considerably less subsidization than those of the All-Union Ministry of State Farms, it appears reasonable to assume that total subsidies to state farms in 1955 were about 2 billion rubles. In earlier years, when state farms' delivery prices were much lower than in 1955, subsidies were undoubtedly much larger.

c. Basic Wages.

Basic wages, excluding supplements from distributed profits, have been estimated at 15.5 billion rubles (see II, C, 2, a, p. 48, above).

d. Social Insurance.

(See II, C, 2, b, p. 51, above.)

e. Materials for Operations.

This category is calculated as a residual on the outlay side of the statement. It should be emphasized that this estimate pertains only to state farms' purchases from the Nonagricultural Enterprise Sector. The total value of materials used in operations, including self-produced seed, fodder, and plants, would of course be much greater.

f. Materials for Capital Repairs.

State farm capital repairs, made from amortization allowances, were estimated at 1.6 billion rubles (see II, C, 3, a, p. 53, above), of which it was estimated that 40 percent, or 0.6 billion rubles, represented materials purchases and 60 percent, or 1 billion rubles, represented wages (see II, C, 1, e, (3), (c), p. 45, above). These wages are included in the figure for basic wages above.

g. New Fixed Investment.

It was estimated above that, of total amortization allowances of 2.6 billion rubles, 1.6 billion rubles were devoted to capital repairs and 1 billion rubles to new fixed investment (see II, D, 3, a, (2), p. 71, above). Because amortization allowances are made from sales revenue, fixed investment financed from amortization allowances is included here, although fixed investment financed from budget grants is excluded from this table.

h. Indirect Taxes.

(See II, C, 1, b, p. 41, above.)

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i. Profits.

(See II, C, 2, a, (1), (b), p. 49, above.)

4. Farm Household Income-in-Kind.

Farm households in the USSR receive an important part of their income in the form of income-in-kind, consisting of agricultural products received as labor-day payments-in-kind and of agricultural products raised on their own plots. In this section of the appendix the value of income-in-kind in 1955 is estimated. First, the theoretical principles underlying the valuation procedure are discussed. Then the methods used in calculating income-in-kind are set forth. Finally, the calculations are presented.

a. Theoretical Principles.

As in the case of all imputed transactions, farm household income-in-kind is estimated by attributing a monetary value to a nonmonetary phenomenon. Because farm households consume a share of the commodities which they produce, this share passes from production into consumption without being given a monetary valuation. In order to assign prices to commodities which are both produced and consumed by farm households, it is necessary to break the identity of households as both producers and consumers by assuming that production is sold or that consumption is purchased.

In Western economies, where a single farm selling price and a single consumer buying price ordinarily prevail for each commodity, the practice in national accounting is to value farmers' consumption-in-kind at the prices which farmers would receive if they were to sell these commodities instead of consuming them. <sup>241/</sup> These selling prices ordinarily differ from the purchase prices paid by urban consumers by the amount of distribution and processing charges. This difference measures the value of distribution and commercial processing services enjoyed by nonfarm consumers but not by farmers when the latter consume their output at the point of production and perform their own processing. Home processing, like the services of housewives, is excluded in the valuation of household consumption.

The problem of assigning prices to Soviet farm household income-in-kind is greatly complicated by the existence of multiple price systems for both the sale and the purchase of agricultural products in the USSR. The output of collective farms and collective farmers, for example, is sold at obligatory delivery prices, contract prices, above-quota state purchase prices, and collective farm market prices. Urban consumers purchase agricultural products at state retail prices and collective farm market prices. Because of the heavy reliance of Soviet fiscal policy upon the turnover tax, an excise levied principally on food and nonfood consumer goods, urban



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consumers' purchase prices ordinarily differ from farm sale prices by much more than the cost of distributing and processing farm products. Therefore, valuation of farmers' consumption-in-kind in the USSR at producers' selling prices does not render this consumption comparable to that of urban residents. This is contrary to the case in Western economies where, as noted above, valuation at producers' selling prices is equivalent to valuation at consumers' purchase prices when the latter are adjusted for distribution and processing charges.

Consequently, it appears more satisfactory to value farmers' consumption-in-kind in the USSR at consumers' purchase prices, adjusted for distribution and processing charges, than at producers' selling prices. Valuation of farmers' consumption-in-kind at consumers' purchase prices makes it comparable to nonfarm consumption and therefore makes it possible to add the two to obtain total household consumption of goods and services.

The method of valuation adopted in this report values farmers' consumption-in-kind at a weighted average of the two prices paid by non-farm consumers -- state retail prices and collective farm market prices. It therefore differs from the methods used in the principal earlier studies of Soviet national income and product. In these studies, farm household income-in-kind was valued at a weighted average of farm selling prices, 242/ at state retail prices less distribution and processing charges, 243/ or on the basis of urban per capita food expenditures. 244/ In comparison with these alternative techniques, the method used in this report seeks to value farm household income-in-kind in prices more comparable to nonfarm consumption without, however, assuming identical per capita consumption by the farm and nonfarm populations.

b. Method of Calculation.

Farm household income-in-kind is calculated in two main steps. First, the disposition of agricultural commodities is estimated in order to derive, as a residual, the quantity of each commodity that was consumed by farm households as income-in-kind. Second, the quantity of consumption-in-kind of each product so derived is valued in accordance with the valuation principles set forth above. The estimates of the quantities of commodities consumed in kind by farmers and the estimates of the corresponding monetary values are both subject to wide margins of error because of many gaps in information. The monetary values, moreover, are subject to additional uncertainty because of the assumptions required to weight the two sets of urban food prices.

In Table 13\* the disposition of the output of each product among seed and feed use (Used in Production) and the various marketing

\* P. 125, below.

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channels (state acquisitions, commission sales, and urban collective farm market sales) is estimated. In the case of some of the commodities in the table, nearly every physical disposition had to be estimated from indirect data, prewar experience, or approximations based on general agricultural requirements. Because little is known about the quantities of the various commodities which were sold on the collective farm market, assumptions and guesswork about this marketing channel have a significant but indeterminable effect on the residual column Farm Household Consumption-in-Kind.

In Table 15\* the commodities composing farm household income-in-kind are valued at prices which are weighted averages of the prices paid by urban consumers. The weighting procedure is based on the assumption that farmers, who for this purpose are regarded as purchasers of their in-kind consumption, would have distributed their purchases of each commodity between the two retail trade outlets -- the state and cooperative trade network and the collective farm market -- in the same proportions as urban consumers actually distributed their purchases of each commodity in 1955. Because commission sales are made at prices only slightly lower than collective farm market prices and are actually a substitute for collective farm market sales, they are grouped for purposes of this valuation with collective farm market purchases (in column H).

Table 13\*\* shows the estimated quantity of each agricultural product purchased by urban consumers in collective farm markets, commission sales outlets, and state and cooperative retail outlets. From these estimates are derived the shares of each commodity purchased in collective farm markets and commission stores, on the one hand, and in state and cooperative stores, on the other. The quantity of each agricultural product purchased by urban consumers in collective farm markets and commission stores is taken from Table 13.\*\* The quantity of each product purchased at state and cooperative retail stores is assumed to be equal to total state acquisitions of that product, also estimated in Table 13,\*\* less military consumption. State acquisitions are allocated not only to retail sales but also to military consumption, exports, industrial processing, and stockpiles. Moreover, state and cooperative sales include imports, which are not included in state acquisitions as calculated in this report. Available data permitted an adjustment only for military consumption. Lack of data precluded adjustments for foreign trade, industrial processing, and stockpiling. The probable net effect of the omission of these adjustments is, in any case, too small to influence appreciably the relative weights of state and cooperative retail trade purchases and collective farm market purchases.

The weights calculated on the basis of the quantities purchased by urban consumers in collective farm markets and commission stores and at

\* P. 142, below.

\*\* P. 125, below.

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state and cooperative stores are then applied to farmers' consumption-in-kind to determine the quantity of each product which they hypothetically purchased through each trade channel. Finally, the quantity of each product attributed to each trade channel is valued at the price of that channel.

All commodities except grain and meat are valued at the prices corresponding to their unprocessed state because this is the form in which they are ordinarily consumed on the farm. In the case of grains, because farm households consume flour (transformed into bread by home baking) instead of the commercially baked bread ordinarily consumed by urban households, the amount retained by farmers is converted into a flour equivalent which is valued at the estimated mill (wholesale) price of flour. This price is used instead of the retail price of flour because of the artificially high level of the latter. In order to discourage home baking and encourage the entry of women into the urban labor force, the Soviet government has fixed the retail price of flour at more than the price of an equivalent amount of bread; in 1955, for example, the retail price of flour was almost double that of an equivalent amount of bread.

Finally, in order to reflect differences in the nature of farm and nonfarm consumption, urban prices are adjusted to exclude charges for transportation and marketing because these services are not enjoyed by farm households. An allowance for these costs, labeled Trade Margin, was deducted from the sums of in-kind consumption priced at state retail and estimated collective farm market prices in Table 15.\* Because of the lack of data, these allowances are only approximate estimates, particularly the allowance for trade costs in collective farm markets, where these costs are chiefly imputed charges for labor-day earnings foregone, rather than explicit costs.

c. Calculations.

In Tables 13\*\* and 15,\* respectively, the disposition of agricultural commodities and the value of farmers' consumption-in-kind are estimated. Each entry in these tables is explained below.

(1) Disposition of Output of Commodities Included in Farm Household Consumption-in-Kind (Table 13\*\*).

(a) Grain.

i. Gross Output.

There are various sets of data relating to the Soviet grain harvest for 1955, each of which yields a slightly different

\* P. 142, below.

\*\* Table 13 follows on p. 125.

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Table 13

Soviet National Accounts, 1955:  
Disposition of Output of Commodities Included in Farm Household Consumption-in-Kind

Commodity	Unit	Marketed Production						Farm Household Consumption-in-Kind A - (B + C)
		A	B	C	D	E	F	
		Gross Output	Used in Production: Seed, Feed, and Waste	Total Marketed	Total State Acquisitions	Commission Sales	Urban Collective Farm Market Sales	
Grain, total	Thousand metric tons	103,000	46,000	41,000	39,800	200 a/	1,000	16,000
Potatoes	Thousand metric tons	67,000	35,000	12,000	5,800	200	6,000	20,000
Vegetables	Thousand metric tons	16,000	2,400	8,500	3,300	200	5,000	5,100
Sunflower seeds	Thousand metric tons	4,200	160	3,100	3,070	Negligible b/	30	940
Flax fiber	Thousand metric tons	560	0	310	310	Negligible b/	0	250
Meat, slaughter weight	Thousand metric tons	5,000	0	3,400	2,500	100	800	1,600
Milk, whole	Thousand metric tons	42,000	6,300	16,300	13,500	100 c/	2,700	19,400
Wool	Thousand metric tons	250	0	230	230	Negligible b/	0	20
Eggs	Millions	15,000	2,000	7,000	4,300	100	2,600	6,000

- a. Grain and grain products.  
b. Not listed in source.  
c. Milk and milk products.

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estimate. Partly, no doubt, the different answers are attributable to rounding. Therefore, any estimate could be subject to some range of error. The data used here yield a figure which appears to be reasonable, taking into consideration the lowest and highest likely harvests.

It is given, according to the terms of the original Sixth Five Year Plan, that the grain production goal for 1960 is 180 million tons.\* 245/ It is elsewhere stated that the gross harvest of grain in Kazakhstan in 1960 will be five times the 1955 level and that the share of Kazakhstan in the total Soviet production of grain will increase from 4.5 percent in 1955 to 12.9 percent in 1960. 246/

If, in 1960, the production of Kazakhstan is to be 12.9 percent of total planned grain production of 180 million tons, or 23.2 million tons, and if the 1960 goal of Kazakhstan is five times its production in 1955, then the 1955 production of Kazakhstan was one-fifth of 23.2 million tons, or 4.64 million tons. As Kazakhstan produced 4.5 percent of all grain in 1955, total 1955 production was 103 million tons.

ii. Used in Production.

Grain used in production is the sum of allowances for seeding, for feeding livestock, and for waste. The estimate of 17.3 million tons of grain used for seed is based on seeding rates compiled from a recent study 247/ and modified by regional data given in another source. 248/ An estimate of 22.9 million tons of grain fed to livestock ("dry" grain as well as equivalent ensiled corn ears) is based on livestock numbers, 249/ seasonally adjusted from 1 October 1955 to 1 January 1956, and feeding rates of the early 1930's. 250/ In addition, approximately 5.8 million tons were allowed for waste, on the basis of US loss factors.

iii. Total Marketed Production.

This item was derived as the sum of Total State Acquisitions, Commission Sales, and Collective Farm Market Sales (columns D + E + F).

iv. Total State Acquisitions.

In 1955, sales and deliveries of grain to the state were 147 million poods more than in 1954. 251/ In 1954, sales and deliveries of grain to the state were 271 million poods more than in 1953, 252/ when 2.01 billion poods were sold and delivered to the

\* Tonnages throughout this appendix are given in metric tons.

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state. <sup>253/</sup> Therefore, in 1955 state acquisitions of grain totaled 2,010 plus 271 plus 147, or (rounded) 2,430 million poods, equal to 39.8 million tons.\*

v. Commission Sales.

Commission sales are made by consumer cooperatives, which buy products from collective farms and farmers at prices somewhat below collective farm market prices. The cooperatives resell these products on the urban collective farm markets, earning a commission of about 10 percent. Commission sales are not included in the state procurement bill or in collective farm market sales. <sup>254/</sup> Therefore, a separate column must be introduced into the table in order to obtain the correct residual figure for farm household consumption-in-kind.

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vi. Urban Collective Farm Market Sales.

In the absence of precise data, estimates for the physical quantities of nearly all products sold on the collective farm market are merely notional allowances. It is quite likely that total sales of grain in the urban collective farm market are several times greater than those for 251 large cities, recently recorded in the Soviet handbook of trade statistics. <sup>256/</sup> This hypothesis seems plausible on the one hand because sales of food grains for privately owned livestock are probably higher in less populous urban localities, and on the other hand because the per capita supply of commercially baked bread is probably somewhat smaller in smaller cities. It is arbitrarily assumed here that 1 million tons is a reasonable estimate for total urban collective farm market sales of grain products. The actual quantity involved is probably not large enough, in any case, to affect seriously the residual calculation of farm household consumption-in-kind.

(b) Potatoes.i. Gross Output.

It is known that Soviet potato production in 1955 was 20 percent lower than in 1950. <sup>257/</sup> The estimate of 67 million tons for total potato production in 1955 is based on an estimate of 84 million tons in 1950.

In 1950, potato production was 21 percent greater than in 1940. <sup>258/</sup> Production in 1940, postwar boundaries, amounted to about 84 million tons, given a yield of 109 centners per

\* Poods are converted at 61.1 poods per metric ton.

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hectare 259/ and a sown area of 7.7 million hectares. 260/ This figure, however, is presumably calculated on a "biological yield" basis rather than a "barn yield" basis, in view of the general Soviet practice at that time. 261/ Recently published data on sugar beet production implies a difference of about 15 to 20 percent between barn production and previously announced figures on biological production. 262/ By assuming a similar difference in the case of potatoes (as they are also a root crop) the 1940 barn production is computed at 69 million tons. As production reportedly increased 21 percent between 1940 and 1950, production in the latter year may be estimated at 84 million tons. Then, 1955 production was 80 percent of 1950 production, or about 67 million tons.

ii. Used in Production.

Seeding rates  were adjusted by regional data  to compute the total quantity of potatoes used for seed in 1955 at 16.1 million tons. An estimate of 12.4 million tons fed to livestock was made after considering the relatively fixed requirements for food, seed, and industrial use. Potato waste was computed as 10 percent of gross output.

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50X1iii. Total Marketed Production.

Marketed production is estimated at about 12 million tons, or slightly below the total marketed production of 12.5 million tons in 1952. 265/ This estimate was derived by determining the quantity of potatoes required to meet estimated industrial, military, and urban consumer demands in 1955.

The alcohol industry used about 1.9 million tons of potatoes in 1955. 266/ It is estimated, however, that only about 1.1 million tons of this quantity can be counted in this estimate of Total Marketed Production because of the extensive use of diseased potatoes for industrial purposes. Procurement for this purpose is probably outside Total State Acquisitions, as it is most likely not paid for.

Military requirements are estimated at about 1.1 million tons (see Military Consumption, Table 15\*).

In 1954, production of potatoes on urban private plots, minus an allowance for seed requirements, was reported at about 44 kilograms per capita, 267/ thus making urban production for consumption by 87 million urban dwellers 268/ about 3.8 million tons. It was also reported that in 1954 urban production accounted for about

\* P. 142, below.

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one-fourth of urban consumption of potatoes, 269/ thus placing total urban consumption in 1954 at about 15.3 million tons.

Because of the admittedly poor crop in 1955, however, it was assumed that urban production, and consumption as well, fell below that of 1954. For 1955, urban production was estimated at about 3.2 million tons and consumption at about 13 million tons (1954 production of 3.8 million and consumption of 15.3 million each being reduced by 15 percent, which is the estimated drop in the total potato crop from 1954 to 1955). Since 3.2 million tons were produced by the consumers themselves, there remained some 9.8 million tons to be bought through state and cooperative retail outlets and collective farm market outlets.

Of total State Acquisitions of 5.8 million tons (see below), 3.6 million tons were available for urban consumption after deducting for industrial and military requirements  $\sqrt{5.8 - (1.1 + 1.1) = 3.6}$ . With the addition of Commission Sales (see below), the quantity available for urban consumers was 3.8 million tons. Therefore, there remained about 6 million tons to be purchased in the urban collective farm market in order to meet the requirements of urban consumers ( $9.8 - 3.8 = 6$ ).

Thus total marketed production of potatoes in 1955 is estimated at 12 million tons, summarized as follows:

State acquisitions	5.8
Commission sales	0.2
Collective farm market sales	6.0
Total	<u>12.0</u>

iv. Total State Acquisitions.

In 1956, sales and deliveries of potatoes to the state were 2.9 million tons more than in 1955 270/ and were more than 50 percent above the 1955 level. 271/ Therefore, in 1955, state acquisitions must have been no more than 5.8 million tons.

v. Commission Sales.

(See (a), v, p. 127, above.)



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vi. Urban Collective Farm Market Sales.

(See iii, p. 128, above.)

(c) Vegetables.i. Gross Output.\*

It is given that Soviet production of vegetables in 1955 was 42 percent greater than in 1950. 272/ The 1950 plan fulfillment report indicated a "good and satisfactory harvest," but no quantitative information was given. 273/ On the basis of an estimated 11-million-ton crop in 1950, computed below, 1955 vegetable production may be assumed to have approximated 16 million tons.

The average vegetable yield over the period 1926-29, when almost all vegetables were cultivated intensively on small plots, was estimated by Gosplan at 138 centners per hectare. 274/ By 1953, small plots accounted for less than one-quarter of the total area sown to vegetables, and collective, state, and institutional farm accounted for 77.6 percent. 275/ Yields in the Ministry of State Farms alone amounted to only 77 centners per hectare in 1952, considerably below private plot yields of the late 1920's. 276/ It is estimated that the actual yield in the socialized sector in 1953 was about 85 centners per hectare, compared with an estimated private plot yield of about 135 centners per hectare. Yield for all producers would then be estimated at 95 centners per hectare, the rounded average of the private and socialized yields weighted by their respective shares in sown area. Thus total vegetable production in 1953 is calculated to have been about 13 million tons, given a sown area of 1.323 million hectares 277/ and a yield of 95 centners per hectare.

Vegetable production in 1954 increased an unspecified amount over production in 1953 278/ and is arbitrarily estimated here at 14 million tons. As it is known that in 1954 vegetable production was 27 percent greater than in 1950, 279/ production in the latter year may be computed as 11 million tons. Thus, as 1955 production amounted to 142 percent of 1950 production, production in 1955 is estimated at about 16 million tons.

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ii. Used in Production.

An estimate of 15 percent of gross output was made arbitrarily to account for low quality and spoiled vegetables fed to livestock.

iii. Total Marketed Production.

This item was derived as the sum of Total State Acquisitions, Commission Sales, and Urban Collective Farm Market Sales (columns D + E + F).

iv. Total State Acquisitions.

In 1955 the state procured 787,000 tons more of vegetables than in 1954. 280/ In 1954 the state procured 445,000 tons more of vegetables than in 1953, 281/ when the plan for the delivery and purchase of 2.3 million tons of vegetables 282/ was slightly underfulfilled. 283/ If state acquisitions in 1953 are estimated at about 2,100,000 tons, then in 1955 state acquisitions of vegetables totaled 2,100,000 plus 445,000 plus 787,000, or about 3.3 million tons.

v. Commission Sales.

(See (a), v, p. 127, above.)

vi. Urban Collective Farm Market Sales.

After deductions for Used in Production and Total State Acquisitions, 10.3 million tons of vegetables remain to be distributed among Commission Sales, Urban Collective Farm Market Sales, and Farm Household Consumption-in-Kind  $\sqrt{16.0 - (2.4 + 3.3) = 10.3/}$ . Since 0.2 million tons were in Commission Sales, 10.1 million tons of vegetables were distributed between Urban Collective Farm Market Sales and Farm Household Consumption-in-Kind. Logically, state acquisitions should absorb the greater part of the production of vegetables by collective farms and all of this production by state farms. Therefore, the remainder of 10.1 million tons of vegetables calculated above should have been largely the product of urban and rural private plot production. In view of the high rate of spoilage in vegetables and the fact that obligatory deliveries of vegetables are not levied on private plot production, it might be supposed that farmers eat as much as half of their own vegetable crop. Given the higher population numbers in the rural areas, the argument appears plausible. Therefore, half of the estimated remaining vegetable output, or 5 million tons, is assumed to be sold on the urban collective farm market, leaving 5.1 million tons for consumption-in-kind.

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(d) Sunflower Seeds.i. Gross Output.

A "biological yield" of 8.6 centners per hectare in 1950 is implied in Soviet official sources. <sup>284/</sup> Khrushchev indicated in 1954 a differential, which may be taken as an upper limit, of 3 centners per hectare between "biological" and "barn" yields of sunflowers: "During the harvest of sunflowers, losses of 2 to 3 centners per hectare are permitted because of the absence of attachments on combines." <sup>285/</sup> If this differential is applied to 1950, a 34-percent discount is implied (from 8.6 to 5.6 centners per hectare). This discount is about the same as the implied grain differential for "barn" as opposed to "biological" yields and fits well with the general practices of harvesting that caused high losses of grain.

If this discounted yield is accepted as the actual yield, "barn" production of sunflowers can be derived for 1955 on the basis of the Soviet official index for sunflower seed production, <sup>286/</sup> which gives 1955 production as 207 percent of 1950 production. If 1950 production is 3.59 million hectares <sup>287/</sup> times 5.6 centners per hectare, or 2.01 million tons, then the estimated harvest in 1955 is 207 percent of 2.01 million tons, or 4.2 million tons.

ii. Used in Production.

Four percent of 1955 gross output of sunflower seeds was allowed for the 1956 planting, based on the following calculations. The area sown to sunflowers rose from 4.03 million hectares in 1954 to 4.24 million hectares in 1955, <sup>288/</sup> and a similar increase of 0.21 million hectares, to 4.5 million hectares, is estimated for 1956. A typical seeding rate of 25 kilograms per hectare, <sup>289/</sup> with an additional allowance of 50,000 tons to take care of higher seeding rates in humid areas and for reseedings in case of frost, results in seed requirements for 1956 of about 160,000 tons.

iii. Total Marketed Production.

In 1937-38, marketable production of sunflower seeds amounted to 1.3 million tons. <sup>290/</sup> This was 62 percent of the harvest of 2.1 million tons. <sup>291/</sup> In recognition of the postwar drive of the Soviet government to raise production and procurement of oil crops, marketed production in 1955 is here estimated at about 75 percent of the total sunflower seed harvest of 4.2 million tons, or 3.1 million tons.

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iv. Total State Acquisitions.

It is estimated that total state acquisitions constituted about 99 percent of total marketed production of seeds. The other 1 percent is a token amount estimated to have been sold in the collective farm market to the populace for chewing.

v. Commission Sales.

Commission sales of sunflower seeds are assumed to be negligible.

vi. Urban Collective Farm Market Sales.

About 1 percent of total marketed production is arbitrarily estimated to have been sold on the collective farm market to meet the people's demand for seeds for chewing.

(e) Flax Fiber.\*

i. Gross Output.

The Soviet official index of flax production gives production in 1955 as 75 percent greater than in 1954, 292/ when yields per hectare were stated to be highest in 37 years. 293/ The highest known barn yield within the period named was 2.9 centners per hectare in 1938, given an output of 0.546 million tons 294/ and a sown area of 1.882 million hectares. 295/ Thus production in 1954 is estimated at about 320,000 tons, given a sown area of 1.11 million hectares 296/ and an estimated yield of 2.9 centners per hectare. For 1955, flax production is therefore estimated at 175 percent of 320,000 tons, or about 560,000 tons.

ii. Used in Production.

Not applicable.

iii. Total Marketed Production.

This item was derived as the sum of Total State Acquisitions, Commission Sales, and Collective Farm Market Sales (columns D + E + F).

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iv. Total State Acquisitions.

In 1955, sales and deliveries of flax fiber to the state were 135,000 tons more than in 1954 <sup>297/</sup> and were 76 percent above the 1954 level. <sup>298/</sup> Therefore, state acquisitions in 1954 must have been about 178,000 tons, and in 1955 about 310,000 tons.

v. Commission Sales.

Commission sales of flax fiber are assumed to be negligible.

vi. Urban Collective Farm Market Sales.

It is assumed that State Acquisitions account for all of the significant marketing of this valuable cash crop.

(f) Meat.i. Gross Output.

Data on state farm production and state farm production as a percentage of total Soviet production were used to derive an estimate of total meat production in 1955 of 10 million tons live weight, or 5 million tons slaughter weight (converted at a ratio of 2 to 1).

I.A. Benediktov, Minister of the All-Union Ministry of State Farms, in a monograph on state farms in the USSR, has stated that in 1954 state farm production of meat constituted 7.5 percent of the total meat production of the USSR and that state farm deliveries of meat constituted 19.2 percent of total meat deliveries to the state. <sup>299/</sup> It is not clear from the context, however, whether Benediktov is referring to state farms in the Ministry of State Farms alone or to all state farms in the USSR. In another source it was stated that in 1954 meat deliveries to the state by state farms of the All-Union Ministry of State Farms constituted 16.5 percent of total deliveries of meat to the state. <sup>300/</sup> Because the percentage quoted by Benediktov is larger than the percentage given in the second source and because both percentages refer to the same year, it is concluded that Benediktov's statement refers to production and deliveries by all state farms in the USSR.

Elsewhere in the Benediktov monograph a table is given which presents statistics of meat production and livestock numbers for 1955 and the plan for 1960. <sup>301/</sup> A comparison of the

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livestock numbers given by Benediktov with numbers given in two other sources 302/ indicates that the livestock data in Benediktov's table refer to numbers in state farms of the All-Union Ministry of State Farms alone. Hence it is assumed that the production data which appear in the same table also refer to production by state farms of the All-Union Ministry of State Farms alone. Thus his figure of 724,100 tons for meat production by state farms 303/ may be assumed to apply to the state farms of the All-Union Ministry of State Farms and not to production by all state farms in the USSR.

Meat production by all state farms may be estimated on the basis of the probable share of the state farms of the All-Union Ministry of State Farms in total state farm meat production. Table 14\* shows livestock numbers and live weights on state farms of the All-Union Ministry of State Farms and on all state farms.

According to Table 14, in 1955 the state farms of the All-Union Ministry of State Farms had livestock with a total weight of 1.4 million tons, or about 90 percent of the 1.6 million tons of all state farms. If meat production is assumed to be proportional to live weight of herds, then the 724,100 tons of meat produced by the All-Union Ministry of State Farms was 90 percent of total state farm production, which may therefore be estimated at about 800,000 tons.

If it is assumed that meat production of all state farms was 7.5 percent of total Soviet meat production in 1955 -- as was the case in 1954 (see above) -- then the 800,000-ton output of state farms was 7.5 percent of total output, which is therefore estimated at about 10 million tons live weight, or 5 million tons slaughter weight.

ii. Used in Production.

Not applicable.

iii. Total Marketed Production.

This was derived as the sum of Total State Acquisitions, Commission Sales, and Collective Farm Market Sales (columns D + E + F).

\* Table 14 follows on p. 136.

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Table 14

Numbers and Live Weight of Livestock on State Farms of the All-Union Ministry  
of State Farms and on All Soviet State Farms a/  
1955

Animal	A	B	C	D	E
	1936-38 Average Live Weight b/ (Kilograms per Head)	End-of-Year Numbers c/ (Million Head)	Weight (Thousand Metric Tons) A x B	End-of-Year Numbers d/ (Million Head)	Weight (Thousand Metric Tons) A x D
		State Farms of Soviet Ministry of State Farms		All Soviet State Farms	
Cattle including cows	260	3.0	780	3.4	880
Hogs	90	3.0	270	4.2	380
Sheep	35	10.2	360	10.6	370
Total		<u>16.2</u>	<u>1,400</u>	<u>18.2</u>	<u>1,600</u>

a. Totals have been rounded to two significant digits.

b. 304/

c. 305/

d. 306/

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iv. Total State Acquisitions.

The state processed 2.5 million tons of meat in 1955. 307/ This quantity is assumed to represent the slaughter weight of total deliveries of livestock to the state.

v. Commission Sales.

(See (a), v, p. 127, above.)

vi. Urban Collective Farm Market Sales.\*

Total marketed output of meat in 1952 was given by Khrushchev as 5 million tons live weight, 308/ of which 3 million tons constituted state procurements. 309/ The remaining 2 million tons should represent sales on the urban collective farm market. Because, however, the coverage of Khrushchev's state procurement figure is not known, in order to avoid an overstatement of urban collective farm market sales, an additional 0.5 million tons was deducted from total marketed output to allow for estimated decentralized procurement and deliveries by state subsidiary agricultural enterprises. This deduction leaves 1.5 million tons live weight, or about 0.7 million tons slaughter weight, as the amount of sales on the urban collective farm market in 1952.

In 1955, sales of meat on the urban collective farm market were 14 percent greater than in 1952, 310/ or approximately 0.8 million tons.

(g) Milk.i. Gross Output.

Data on state farm production and state farm production as a percentage of total Soviet production were used to derive an estimate of total milk production in 1955 of 42 million tons. The technique followed is identical with that used in the derivation of the meat output estimated above.

For 1954, Benediktov gave "state farm" production of milk as 6.4 percent of the total milk production of the USSR and state farm milk deliveries as 18.2 percent of total milk deliveries to the state. 311/ Because deliveries by state farms of the All-Union Ministry of State Farms alone constituted

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16.2 percent of total milk deliveries to the state, 312/ it was concluded that the former statement refers to production and deliveries by all state farms.

Milk production by all state farms may be estimated on the basis of the share of state farms of the All-Union Ministry of State Farms in total cow numbers on all state farms. In 1955, end-of-year cow numbers on state farms of the All-Union Ministry of State Farms were 1.2 million, 313/ or 92 percent of the total of 1.3 million on all state farms at the end of 1955. 314/ If milk production is assumed to be proportional to cow numbers, milk output of 2.5 million tons by the All-Union Ministry of State Farms 315/ was 92 percent of total state farm output, estimated therefore at 2.7 million tons.

If it is assumed that in 1955 production of 2.7 million tons of milk by all state farms represents 6.4 percent of total milk output -- their share in 1954 (see above) -- then total Soviet milk production would therefore be about 42 million tons.

ii. Used in Production.

On the basis of information on the fattening of animals on collective farms, it is estimated that milk fed and wasted constitutes about 15 percent of gross output. 316/

iii. Total Marketed Production.

This was derived as the sum of Total State Acquisitions, Commission Sales, and Collective Farm Market Sales (columns D + E + F\*).

iv. Total State Acquisitions.

Milk deliveries to the state from 1 January 1956 to 1 November 1956 totaled 15.9 million tons, 2.4 million tons more than during the whole of 1955. 317/ Therefore, in 1955 milk deliveries to the state were 13.5 million tons.

v. Commission Sales.

(See (a), v, p. 127, above.)

vi. Urban Collective Farm Market Sales.\*\*

Total marketed output of milk in 1952 was given by Khrushchev as 13.2 million tons, 318/ of which 10.1 million

\* Table 13, p. 125, above.

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tons constituted state procurements. 319/ The remainder of 3.1 million tons should represent sales on the urban collective farm market. Because, however, the coverage of the state procurement figure quoted by Khrushchev is unknown, in order to avoid an overstatement of collective farm market sales, 0.8 million tons in addition was deducted to allow for estimated decentralized procurement and deliveries by state subsidiary agricultural enterprises. This deduction leaves 2.3 million tons as the amount of sales on the urban collective farm market.

Milk sales on the urban collective farm market in 1955 were 16 percent greater than in 1952, 320/ or about 2.7 million tons.

(h) Wool.i. Gross Output.

Khrushchev stated that wool output in 1953 amounted to 230,000 tons, 321/ which, according to the Soviet official index for wool output, 322/ is 92 percent of 1955 output. Therefore, 1955 output was 250,000 tons.

ii. Used in Production.

Not applicable.

iii. Total Marketed Production.

This was derived as the sum of Total State Acquisitions, Commission Sales, and Collective Farm Market Sales (columns D + E + F\*).

iv. Total State Acquisitions.

In 1956, collective farms, state farms, and individuals delivered to the state 247,000 tons of wool, 17,000 tons more than in 1955. 323/ Therefore, in 1955, 230,000 tons of wool were delivered.

v. Commission Sales.

Commission sales of wool are assumed to be negligible.

\* Table 13, p. 125, above.

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vi. Urban Collective Farm Market Sales.

As in the case of flax fiber, it is assumed that all significant marketed production of this commodity passes through State Acquisitions.

(i) Eggs.i. Gross Output.

Poultry numbers and egg yield per chicken, together with the Soviet official index of egg production, were used to derive an estimate of 1955 production of 15 billion eggs.

Poultry numbers on 1 January 1951 were reported to be 14 percent above the 1940 level, 324/ presumably above the level of 1 January 1941, when there were 183 million chickens. 325/ On the assumption that chicken numbers increased in the same proportion as total poultry, chicken numbers for 1951 were estimated at 209 million. In 1927-28 the yield per chicken was 53 eggs. 326/ If egg yield in 1951 is assumed to be about the same as that of the 1927-28 period, then egg production in 1951 can be estimated at 11 billion. Therefore, 1955 production, reported by the Soviet official index as 136 percent of 1951 production, 327/ is estimated at about 15 billion eggs.

ii. Used in Production.

An allowance of 2 billion eggs was arbitrarily estimated to be necessary for maintaining flocks.

iii. Total Marketed Production.

It was arbitrarily assumed that approximately half of the total output of 15 billion eggs, or 7 billion, was marketed.

iv. Total State Acquisitions.

Because there was no information on 1955 egg deliveries, the 1954 plan for total state procurement of 4.3 billion eggs, 328/ which is believed to have been underfulfilled since the Russians made no mention of its success in the 1954 plan fulfillment report, 329/ was used as the estimate of 1955 total state acquisitions of eggs.

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v. Commission Sales.

(See (a), v, p. 127, above.)

vi. Urban Collective Farm Market Sales.

This item was derived as the residual of Total Marketed Production less the sum of Total State Acquisitions and Commission Sales  $\overline{[\text{column C} - (\text{columns D} + \text{E})^*]}$ .

(2) Valuation of Farm Household Consumption-in-Kind.

(See Table 15\*\*).

(a) Commodity.i. All Other.

The items listed in column A of Table 15 are identical with those appearing in Table 13, with the addition of the residual category All Other. The valuation assigned to these other commodities is necessarily a notional allowance, given the absence of adequate production and marketing information concerning these items. Products assumed to be included under the designation All Other are fruits, nuts, berries, honey, mushrooms, fresh water fish, game animals and their products, minor technical crops (fibers other than flax and oilseeds other than sunflower), tobacco and makhorka, tea, herbs, and firewood. The large number of products is in itself no measure of the relative value of All Other compared with the specified products. The object of consideration must be the typical Russian farmer, from whose point of view the important agricultural commodities consumed in-kind other than those specified in the table are fruit and fresh-water fish and, to a lesser extent, mushrooms and game animals. The average Russian farmer does not receive tea, herbs, tobacco, or even oilseed products in-kind but rather buys them for cash in the market. On the other hand, the typical farmer does heat his hut with firewood, most of which he receives from collective farm and state forest lands through his own cutting.

Precise measurement of All Other products being out of the question, it is possible only to make some judgment about a reasonable order of magnitude. It seems possible that the value of the commodities in question may constitute 15 percent of total farm household consumption-in-kind.

\* Table 13, p. 125, above.

\*\* Table 15 follows on p. 142.

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Table 15

Valuation of Soviet Farm Household Consumption-in-Kind  
1955

A	B	C	D	E	F	G	H
Commodity	Total Marketed Production C + D + E (Thousand Metric Tons)	Total State Acquisitions (Thousand Metric Tons)	Purchases in Commission Sales Outlets (Thousand Metric Tons)	Purchases in Urban Collective Farm Market (Thousand Metric Tons)	Military Consumption (Thousand Metric Tons)	Purchases in State and Cooperative Retail Outlets C - F (Thousand Metric Tons)	Purchases in Commission Sales Outlets and Urban Collective Farm Market D + E (Thousand Metric Tons)
Grain, total a/	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potatoes	12,000	5,800	200	6,000	1,100	4,700	6,200
Vegetables	8,500	3,300	200	5,000	630	2,670	5,200
Sunflower seeds	3,100	3,070	Negligible	30	Negligible	3,070	30
Flax fiber	310	310	Negligible	0	0	310	Negligible
Meat, slaughter weight	3,400	2,500	100	800	360	2,140	900
Milk, whole	16,300	13,500	100	2,700	Negligible	13,500	2,800
Wool	230	230	Negligible	0	0	230	Negligible
Eggs	77,000 b/	4,300 b/	100 b/	2,600 b/	Negligible b/	4,300 b/	2,700 b/
All other c/	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Total d/							
Trade margin allowance							
Total excluding trade margin allowance							

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Table 15

Valuation of Soviet Farm Household Consumption-in-Kind  
1955  
(Continued)

Commodity	I	J	K	L	M
	Total Retail Purchases G + H (Thousand Metric Tons)	Farm Household Consumption-in-Kind (Thousand Metric Tons)	Quantity of J Valued at State Retail Prices $\frac{G}{I} \times J$ (Thousand Metric Tons)	Prices for K: 1955 Moscow State Retail Prices (Rubles per Metric Ton)	Value of Share of J Priced at State Retail Prices K x L (Million Rubles)
Grain, total <u>a/</u>	Not Applicable	16,000	14,000 <u>e/</u>	1,600 <u>f/</u>	22,000
Potatoes	10,900	20,000	8,600	700	6,020
Vegetables	7,870	5,100	1,700	1,200	2,040
Sunflower seeds	3,100	940	930	4,000 <u>g/</u>	3,720
Flax fiber	310	250	250	21,000 <u>h/</u>	5,250
Meat, slaughter weight	3,040	1,600	1,120	15,000	16,800
Milk, whole	16,300	19,400	16,100	2,200	35,420
Wool	230	20	20	13,000 <u>i/</u>	260
Eggs	7,000 <u>b/</u>	6,000 <u>b/</u>	3,660 <u>b/</u>	9 <u>j/</u>	3,290
All other <u>c/</u>	Not Applicable	Not Applicable	Not Applicable	Not Applicable	15,000
Total <u>d/</u>					110,000
Trade margin allowances					13,000
Total excluding trade margin allowance					97,000

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Table 15

Valuation of Soviet Farm Household Consumption-in-Kind  
1955  
(Continued)

Commodity	N	O	P	Q
	Quantity of J Valued at Estimated Collective Farm Market Prices $\frac{H}{J} \times J$ (Thousand Metric Tons)	Price for N: 1955 Estimated Collective Farm Market Prices (Rubles per Metric Ton)	Value of Share of J Priced at Estimated Collective Farm Market Prices N x O (Million Rubles)	Total Value of Farm Household Consumption-in-Kind M + P (Million Rubles)
Grain, total <u>a/</u>	Not Applicable	Not Applicable	Not Applicable	22,000
Potatoes	11,400	1,600	18,240	24,260
Vegetables	3,400	2,100	7,140	9,180
Sunflower seeds	10	4,000	40	3,760
Flax fiber	0	None	0	5,250
Meat, slaughter weight	480	15,200	7,300	24,100
Milk, whole	3,300	2,500	8,250	43,670
Wool	0	None	0	260
Eggs	3,340 <u>b/</u>	10 <u>k/</u>	3,340	6,630
All other <u>c/</u>	Not Applicable	Not Applicable	8,000	23,000
Total <u>d/</u>			52,000	162,000
Trade margin allowance			4,000	17,000
Total excluding trade margin allowance			48,000	145,000

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Table 15

Valuation of Soviet Farm Household Consumption-in-Kind  
1955  
(Continued)

- 
- a. Because the flour equivalent of grain is valued at the estimated mill (wholesale) price of flour, no weighting of sales through the two retail trade channels is required.
  - b. Million units.
  - c. Includes fruits, nuts, berries, honey, mushrooms, fresh-water fish, game animals and their products, minor technical crops, tobacco and makhorka, tea, herbs, and firewood.
  - d. Totals are derived from unrounded figures and do not always agree with the sum or the product of their rounded components.
  - e. In terms of the flour equivalent of grain, using an extraction rate of 85 percent for the milling of flour.
  - f. Estimated mill (wholesale) price of flour.
  - g. Estimated collective farm market price.
  - h. Contract sale price.
  - i. Obligatory delivery price.
  - j. 9 rubles per 10 eggs.
  - k. 10 rubles per 10 eggs.

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(b) Total Marketed Production.

(See Table 13.\*)

(c) Total State Acquisitions.

(See Table 13.)

(d) Purchases in Commission Sales Outlets.

(See Table 13.)

(e) Purchases in Urban Collective Farm Market.

(See Table 13.)

(f) Military Consumption.

Data  give amounts of foodstuffs per man per day. These amounts were adjusted to an annual basis and were multiplied by the estimated number of Soviet militarized personnel in 1955. 331/

50X1

(g) Purchases in State and Cooperative Retail Outlets.

This item is the difference between Total State Acquisitions and Military Consumption (column C - column F).

(h) Purchases in Commission Sales Outlets and Urban Collective Farm Market.

This item is the sum of purchases in commission sales outlets and in the urban collective farm market (column D + column E).

(i) Total Retail Purchases.

This item is the sum of purchases in state and cooperative retail outlets, in commission sales outlets, and in the urban collective farm market (column G + column H).

(j) Farm Household Consumption-in-Kind.

(See Table 13.)

\* P. 125, above.

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(k) Quantity of Farm Household Consumption-in-Kind  
Valued at State Retail Prices.

For each commodity, the share of consumption-in-kind valued at state retail prices is equal to the share of purchased consumption obtained through state and cooperative retail trade (columns  $\frac{G}{I} \times J$ ).

(1) 1955 Moscow State Retail Prices.

For some commodities, state retail prices are not applicable. Therefore, other prices were used: for grain, the mill price of flour; for sunflower seeds, the collective farm market price; for flax fiber, the contract sale price; and for wool, the obligatory delivery price.

i. Grain.

As explained in 4, b, above, the mill price of flour is used here as the preferred price for valuing farmers' consumption-in-kind of grain products. In view of historical experience and the general impressions of many recent visitors and defectors, ordinary rye flour may be taken as the typical constituent of the Russian farmer's bread. A price of 160 rubles per 100 kilograms (kg) of ordinary rye flour at the mill may be obtained by deducting the component processing and distribution costs from the retail price of bread, according to the breakdown of these costs provided by Coogan. 332/ It is assumed that the lower retail price for bread in 1955 relative to 1950, the last year covered by Coogan's data, embodies higher costs for labor. On the basis of a state retail store price of 1.75 rubles per kg of rye bread in 1955, 333/ the following calculation yields the estimated flour price:

	<u>Rubles Per 100 Kilograms</u>
Retail price of bread	175
Less: Cost of distributing bread	15
Equals: Cost of baking bread	160
Less: Nonflour cost of baking bread	37
Equals: Flour cost in bread	123
Equals: Flour cost at bakery*	185
Less: Transport costs from mill to bakery	25
Equals: Flour cost at mill	160

\* A bread-flour yield of 150 percent is assumed on the basis of data cited by Coogan -- that is, it is assumed that 100 kg of bread are made with 66.7 kg of flour. If 66.7 kg of flour, found in 100 kg of bread, cost 123 rubles, then 100 kg of flour cost 150 percent of this amount, or 185 rubles.

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ii. Potatoes.

[Redacted]

50X1

iii. Vegetables.

[Redacted]

50X1

iv. Sunflower Seeds.

The estimated collective farm market price was used as the state retail price.

v. Flax Fiber.

The state retail price for flax fiber is assumed to be equal to the estimated contract price of 21,000 rubles per metric ton. The estimate is based on the following information.\*

In 1954, Belorussian collective farm deliveries of 24,300 tons of fiber equivalent 336/ and 21,300 tons of seed 337/ were valued at 585 million rubles. 338/ The base price per ton of seed in 1954 was 70 percent 339/ above the 1952 level of 800 rubles, 340/ or approximately 1,360 rubles. The maximum value of seed, including high-quality seed, was estimated at 3,000 rubles per ton. At this maximum value per ton, the maximum value of 21,300 tons of seed deliveries was about 64 million rubles. Deduction of the maximum for seed from total value of deliveries of fiber and seed of 585 million rubles leaves a minimum of 521 million rubles for fiber alone. Each of the 24,300 tons of fiber, therefore, had a minimum average price of 21,000 rubles per ton.

vi. Meat.

[Redacted]

50X1

vii. Milk.

[Redacted]

50X1

viii. Wool.

The obligatory delivery price was computed from data on prices for different grades of wool announced in the livestock decree of September 1953. 343/.

[Redacted]

50X1

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ix. Eggs.

50X1

(m) Value of the Share of Farm Household Consumption-in-Kind Priced at State Retail Prices.

This item is the product of the share of farm household consumption-in-kind valued at state retail prices and the corresponding state retail prices (column K x column L).

(n) Quantity of Farm Household Consumption-in-Kind Valued at Estimated Collective Farm Market Prices.

For each commodity, the share of consumption-in-kind valued at estimated collective farm market prices is equal to the share of purchased consumption obtained through collective farm market trade (columns  $\frac{H}{I}$  x J).

(o) 1955 Estimated Collective Farm Market Prices.

Because collective farm market prices vary widely both regionally and seasonally, the few sample price quotations found in Soviet sources or in reports by visitors to the USSR do not provide a sound basis for estimating average prices for the country as a whole. As might be expected, free prices are higher in large cities than in small cities and higher in industrial regions than in industrially undeveloped areas. <sup>345/</sup> On both counts, Moscow prices, for which the best coverage exists, are far from typical. Some indication of the unrepresentative character of Moscow collective farm market prices is obtained by multiplying estimates of the quantities sold in the urban collective farm markets, given in Table 13,\* by annual average Moscow prices for those commodities. <sup>346/</sup> The combined value of sales of these specified commodities alone totals more than the 48.9-billion-ruble figure given by Soviet authorities as 1955 sales in this market outlet. <sup>347/</sup>

Because of the inapplicability of available collective farm market prices, average commission store prices are considered the best available approximation to national average collective farm market prices. By official regulation and intention, commission sale prices are pegged at a level slightly below collective farm market prices. The procedure of assuming collective farm market prices to be equal to commission sale prices appears to result in less

\* P. 125, above.

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over-all distortion than the alternative procedures of using Moscow collective farm market prices or of arbitrarily estimating national average collective farm market prices.

Commission trade prices in 1955 are computed from corresponding quantity and value data. 348/ The milk price is for milk and milk products excluding butter. The sunflower seed price is estimated at one-quarter of the vegetable oil price, on the assumption of 4 tons of seed per ton of oil and without any allowance for value added in processing of seeds.

(p) Value of the Share of Farm Household Consumption-in-Kind Priced at Estimated Collective Farm Market Prices.

This item is the product of the share of farm household consumption-in-kind valued at estimated collective farm market prices and the corresponding estimated collective farm market prices (column N x column O).

(q) Total Value of Farm Household Consumption-in-Kind.

This item is the sum of the values of the two shares of farm household consumption-in-kind, one priced at state retail prices and the other priced at estimated collective farm market prices (column M + column P).

(r) Trade Margin Allowance.

aa. Share of Consumption-in-Kind Priced at State Retail Prices.

The trade margin on food sales by state and cooperative retail outlets, excluding public dining establishments, is estimated at 12 percent on the basis of (1) the average markups in retail and wholesale trade, (2) the relative importance of food and non-food goods in total state and cooperative sales, and (3) the difference in marketing costs between food and nonfood goods.

(1-1) The trade markup is the sum of costs of operation and profits. In 1955, total state and cooperative retail trade turnover, excluding public dining, was 443.1 billion rubles. 349/ In retail trade, the markup of goods in 1955 was 34.7 billion rubles 350/; in wholesale trade, the markup was 7.6 billion rubles (the sum of total costs of 5.8 billion rubles plus profits of 1.8 billion rubles). 351/ The combined retail and wholesale markup was therefore 34.7 plus 7.6, or 42.3 billion rubles. This figure is 9.5 percent of total retail trade turnover of 443.1 billion rubles.

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(2-2) In 1955, foodstuffs accounted for 49.5 percent, and nonfood goods for 50.5 percent of state and cooperative retail sales (excluding public dining). 352/

(3-3) A recent Soviet source indicates that marketing costs for food goods are five-thirds the level of costs for nonfood goods. 353/ Then, if  $X$  = the markup in food distribution and  $Y$  = the markup in nonfood goods distribution,  $X = \frac{2}{3} Y$  and  $0.495 X + 0.505 Y = 9.5$ . Solution of these equations yields 11.9 percent for  $X$  and 7.1 percent for  $Y$ . Therefore, it is estimated that marketing costs in the state and cooperative retail trade network average 12 percent of the value of food sales.

In the application of this estimate, no attempt is made to allow for the large variations in the cost of marketing different agricultural products in the USSR. 354/ The list of commodities composing farm household consumption-in-kind is by no means complete, and the individual quantities of all the various products included under All Other cannot be specified. Therefore, a general estimate of marketing costs for food is used instead of one embodying individual adjustments for each commodity.

bb. Share of Consumption-in-Kind Priced at  
Estimated Collective Farm Market Prices.

This allowance for costs incurred in collective farm market trade is essentially notional. It is based on the assumption that the chief element of trade costs, labor, is appropriately assigned less value in collective farm market transactions than in state and cooperative retail trade, because the incomes of collective farmers are lower than those of urban workers and employees. No reliable calculation of labor, transport, and tax costs incurred in collective farm market trade is possible with existing data. Therefore, it is arbitrarily assumed that trade costs in collective farm market trade, as they are certainly somewhat smaller than food distribution costs in state and cooperative retail trade, may have amounted to 4 billion rubles, or about 9 percent of the volume of turnover.

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