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LETTERS OF TRANSMITTAL

OCTOBER 19, 1959.

Hon. PAUL H. DOUGLAS,
Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR DOUGLAS: Transmitted herewith is part II of a series of papers submitted by the panelists invited to appear before the Subcommittee on Economic Statistics in connection with the subcommittee's current study of "Comparisons of the United States and Soviet Economies." Additional papers were released October 2 in part I. Part III, to be issued in November, will present papers in summary and conclusion.

This study is being conducted in accordance with instructions from the full committee as announced in the Joint Economic Committee's report on the 1959 Economic Report of the President. The study grows out of previous work of the Joint Economic Committee during the 83d and 85th Congresses.

It should be recognized, as was stated in the earlier studies, that the problems of making comparisons between any two national economies are exceedingly complex and even more so when those economies are at different stages of development and have different policy objectives. Such limitations are carefully set forth in the papers of the opening panel and will be further assessed by the panelists preparing the summary and conclusions.

The papers are presented in advance of the subcommittee's hearings in accordance with the Joint Economic Committee's usual practice in order to provide members of the subcommittee and the participating panelists an opportunity to examine thoroughly the analyses and findings in preparation for the discussions at the hearings.

RICHARD BOLLING,
Chairman, Subcommittee on Economic Statistics.

OCTOBER 15, 1959.

Hon. RICHARD BOLLING,
Chairman, Subcommittee on Economic Statistics,
House of Representatives, Washington, D.C.

DEAR REPRESENTATIVE BOLLING: Transmitted herewith is part II of the series of papers submitted by the panelists invited to appear before the Subcommittee on Economic Statistics at the hearings to be held November 16–20. The papers are arranged by panel topics in the order in which they are scheduled for discussion at the hearings. Part I, containing the papers of panelists appearing in the earlier part of the hearings dealt with the subjects of "Problems of Soviet-United States comparisions," "Population and Labor Force," "Industry," "Transportation," "Agriculture," and "Levels of Living and

Incentives in the Soviet and United States Economies." Part III, containing the papers on summary and policy implications, will be submitted in early November.

The papers are presented as submitted by the panelists, without deletions.

JOHN W. LEHMAN,
Economist, Subcommittee on Economic Statistics.

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COMPARISONS OF THE UNITED STATES AND SOVIET ECONOMIES

NATIONAL INCOME AND PRODUCT

A COMPARISON OF SOVIET AND UNITED STATES NATIONAL PRODUCT[1]

(By Morris Bornstein, University of Michigan)

INTRODUCTION

The purpose of this paper is to make selected comparisons of the structure, size, and growth of the national products of the U.S.S.R. and the United States.

Of all the respects in which the economies of these two countries may be compared, national product comparisons probably provide the broadest, most comprehensive view, because they embrace, for each country, the net output of all goods and services produced during the specified period. Furthermore, because national product data are obtained from detailed national accounts studies, they not only provide summary measures of total output but also furnish much information regarding the structure of the economy. Thus, the pattern of resource allocation may be illustrated by analysis of the distribution of national product by its major end-use components, such as consumption, investment, defense, and government administration. Likewise, the pattern of resource allocation may be analyzed in terms of the relative importance of the different sectors in which national income, generated in producing national product, originates, such as industry, agriculture, services and trade. Finally, these end-use and sector-of-origin breakdowns, together with other data, make possible international comparisons of relative size and estimates of growth trends.

However, because national product comparisons involve the aggregation of quite different items by value weights, the results obtained are very sensitive to the weighting systems employed. The usual weighting problems of intertemporal and interspatial comparisons are intensified in a Soviet-United States comparison because of uncertainties about the meaning of Soviet prices. Hence, it is desirable to consider national product comparisons in conjuncture with other comparisons which are less susceptible to weighting problems, such as selected physical output comparisons and labor force comparisons.

At the same time, it should be recognized that while national product provides a convenient measure of overall economic capability, this

[1] The author wishes to thank Janet Riddle, Florence Roof, and Harold Demsetz for their suggestions about various aspects of this paper.

measure is not the most significant one for various economic, military, scientific, and political questions. For example, although Soviet national product may be only half the size of U.S. national product (by one measurement), the U.S.S.R. may, as a result of the particular composition and application of this smaller product, match or surpass the United States in military strength or in selected scientific programs. Thus, the usefulness of national product comparisons depends on the question at issue. For some questions, other measures are undoubtedly superior.

The national product comparisons in this paper concentrate on the period since 1950 because this period appears to be more representative of the conditions of economic competition between the two countries which may be anticipated in the future than would a longer historical period, such as that from 1913 or 1928 to the present. These longer periods span conditions of world war, the first rapid spurt of the Soviet industrialization drive, and a severe depression in the United States. In contrast, the period since 1950 has been more characteristic of likely future conditions in both countries. By 1950, the U.S.S.R. had largely recovered from the effects of World War II, while the United States had completed its reconversion from the war. In the conditions of internationl tension prevailing since 1950, both countries have endeavored to maintain a strong, up-to-date military posture while continuing to develop their civilian economies. So long as the international situation continues to be one of "cold war" and "competitive coexistence," analysis of the period since 1950 will be more useful for an appraisal of probable future trends and relationships than would reference to a longer period of significantly different political and economic conditions. Study of these longer, earlier periods does, of course, provide valuable insight into the dynamics of national product and is thus useful for an understanding of more recent developments and probable future trends. Some comparisons of Soviet and United States national product characteristics and trends before 1950 are available in various earlier studies.[2] For this reason, as well as for the reasons indicated above, attention will be focused on relationships and developments in Soviet and United States national product since 1950, with only limited reference to earlier periods.

The following sections of this paper are concerned, respectively, with (1) an analysis of the structure of Soviet and United States national product and income in 1955, (2) a comparison of their relative size in 1955, and (3) an estimate of trends in their gorwth since 1950. In each section, conceptual and statistical problems hampering such national product comparisons are discussed, and the approximate character of the estimates is stressed. Nevertheless, I believe the results provide a fairly reliable indication of the orders of magnitude involved.

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[2] For national product comparisons for the period from 1928 to 1955, see Library of Congress, Legislative Reference Service, "Soviet Economic Growth: A Comparison With the United States," a study prepared for the Subcommittee on Foreign Economic Policy of the Joint Economic Committee, 85th Cong., 1st sess., Washington, Government Printing Office, 1957, ch. VI. References to other studies are given in this source.

STRUCTURE OF NATIONAL PRODUCT

In this section the structures of Soviet and United States national product are compared, first by analyzing the shares in the total product of each country of the principal end-use components, and second by analyzing the shares in the total national income of each country of the major sectors of origin in which income is generated. In both instances, reference is to each country's national product or income expressed in its own currency—rubles for the U.S.S.R. and dollars for the United States—with the resulting comparisons being only comparisons of the percentage shares of the specified uses or sectors in each country's total product or income. No comparison is made, at this point, of the relative size of the two economies. Rather only their resource allocation patterns are compared, without reference to the quantity of output produced in the two countries.

Before turning to these calculations, however, a few words are necessary regarding the serious conceptual and statistical problems encountered in such comparisons. Although these difficulties are not, in my judgment, so severe as to invalidate the basic conclusions to be drawn from such comparisons, they do qualify the precision which may be attributed to these figures, particularly the estimates for the U.S.S.R.

Two major conceptual problems are involved in such comparisons. First, output or productive activity in the two countries must be classified in comparable categories, which in some cases proves difficult because of the differences between the two countries in economic and political organization and objectives. Second, because of the different roles in the two countries of indirect taxes and subsidies, it is desirable to compare their economic structures not only in terms of established prices[3] but also in terms of adjusted prices, which allow for this difference and which, therefore, permit a somewhat more accurate comparison of real resource allocation.

The ability to make fairly precise comparisons of the structures of Soviet and United States national product is further hampered by a lack of necessary statistical data, chiefly for the U.S.S.R. The necessary basic national accounts are not published by the Soviet Government but must instead be compiled by a laborious and ingenious assembly of scattered Soviet data, supplemented by many estimates of varying precision. Likewise, Soviet data are lacking for many of the adjustments of basic accounts information which are needed to secure comparability with the figures for the United States. In contrast, most of the data needed for the U.S. side of such comparisons is readily available, primarily from the publications of the Department of Commerce. As a result, it ordinarily proves necessary to rearrange and adjust U.S. figures to match the categories used for the U.S.S.R., the opposite usually being impossible.

National product by end use

Table 1 shows the distribution of gross national product in the U.S.S.R. and United States in 1955 in terms of four end-use or

[3] The term "established prices" is used in this paper in preference to "market prices" in recognition of the fact that Soviet prices, with the exception of collective farm market prices, are determined by administrative decree rather than by market forces.

purpose categories: Consumption, investment, defense, and government administration.[4]

The consumption category in table 1 includes both household expenditures on goods and services (including income-in-kind) and government current (i.e., noncapital) expenditures on health and education. This coverage is necessary to provide comparability, because in the U.S.S.R. virtually all outlays on health and education are made by the government, whereas in the United States a significant share of expenditures for these purposes is made by households.

TABLE 1.—*Gross national product by end use in the U.S.S.R. and the United States, at established prices and at adjusted prices, 1955* [1]

End use	U.S.S.R.[2]				United States			
	At established prices		At adjusted prices		At established prices		At adjusted prices	
	Billion rubles	Percent of total	Billion rubles	Percent of total	Billion dollars	Percent of total	Billion dollars	Percent of total
Consumption	840.8	65.4	566.4	58.9	269.7	67.8	240.1	66.3
Investment	263.5	20.5	241.8	25.2	77.2	19.4	73.5	20.3
Defense	144.6	11.2	125.2	13.0	38.4	9.7	36.9	10.2
Government administration	36.9	2.9	27.6	2.9	12.1	3.1	11.7	3.2
Gross national product	1,285.8	100.0	961.0	100.0	397.5	100.0	362.2	100.0

[1] Gross national product (GNP) at adjusted prices=GNP at established prices—indirect taxes+subsidies. Components may not add to totals, because of rounding.

[2] Figures for the U.S.S.R. are for gross domestic product, exclusive of the net effect of transactions with foreign countries, rather than for GNP strictly defined, because of the lack of balance of payments information for the U.S.S.R. and even of merchandise trade data valued at internal prices. Published merchandise trade figures in rubles are expressed, essentially, at world market prices converted to rubles at the official exchange rate. This "valuta" or "foreign trade ruble" valuation differs from the value of these goods at their internal prices, which for most items exceeds their foreign trade ruble valuation. The effect of this omission on total product and its end-use distribution, however, is slight, because only net foreign sales or purchases of goods and services would be included in the calculation of GNP, and this net figure is undoubtedly a small fraction of Soviet GNP, much less than 1 percent. For data pertinent to this point, see A. Nove and Alfred Zauberman, "A Dollar Valuation of Soviet National Income," Soviet Studies, vol. X, No. 2, October 1958, pp. 146-150. Similarly, for the United States, the difference between GNP and gross domestic product is insignificant.

SOURCES AND DERIVATION

U.S.S.R.—Morris Bornstein, "Soviet National Accounts for 1955," unpublished manuscript.

United States, established prices.—GNP data in Department of Commerce, Office of Business Economics, U.S. Income and Output, Washington, Government Printing Office, 1958, p. 119, were reclassified into the four categories shown in the table on the basis of information in that study and in other sources.

Consumption includes personal consumption expenditures plus current expenditures on health and education by Federal, State, and local governments. The latter represent purchases of goods and services

[4] Figures for the United States are derived from data of the Department of Commerce and other U.S. Government agencies, as explained in notes to the table. Figures for the U.S.S.R. are from an unpublished manuscript of the author, "Soviet National Accounts for 1955." This study follows the general approach of the pioneering studies of national accounts for the U.S.S.R. by Bergson, Heymann, and Hoeffding (Abram Bergson, "Soviet National Income and Product in 1937," New York, Columbia University Press, 1953; Abram Bergson and Hans Heymann, Jr., "Soviet National Income and Product, 1940–48," New York, Columbia University Press, 1954; and Oleg Hoeffding, "Soviet National Income and Product in 1928," New York, Columbia University Press, 1954). The results of the author's study correspond closely to those in two other recent studies of Soviet national accounts for 1955, one by the Economic Commission for Europe (ECE) ("An Estimate of the National Accounts of the Soviet Union for 1955, "Economic Bulletin for Europe, vol. 9, No. 1, May 1957, pp. 89–107), and one by Hoeffding and Nimitz (O. Hoeffding and N. Nimitz, "Soviet National Income and Product, 1949–55," RM–2101, Santa Monica, Calif., the Rand Corp., 1959). For the same aspects of Soviet national accounts in 1955, the results of these three studies differ relatively little, with the differences in results being fairly readily explained by conceptual differences, differences in data available at the time the studies were completed, and differences in estimating procedures. The major differences are those of coverage. The ECE study does not contain end-use or origin breakdowns or an adjustment of established prices for indirect taxes and subsidies. The Hoeffding-Nimitz study contains an end-use breakdown in established prices but not one in adjusted prices; it also lacks an origin breakdown. In the present writer's study, from which data for the U.S.S.R. in tables 1 and 2 are drawn, end-use and origin breakdowns and a price adjustment are included.

exclusive of investment in construction and equipment and were estimated from data in ibid., pp. 175 and 190.

Investment includes gross private domestic investment (ibid., p. 119); new public construction exclusive of military facilities (Economic Report of the President, January 1959, Washington, Government Printing Office, 1959, p. 176); an estimate of governmental purchases of producers' durables for non-defense purposes (based on data in Department of Commerce, Bureau of the Census, Summary of Governmental Finances in 1955, Washington, 1956, pp. 29–30); stockpiling and defense production expansion (U.S. Income and Output, p. 175); and net exports of goods and services (ibid., p. 182).

Defense includes expenditures on the military services, foreign military assistance, and atomic energy development. It excludes stockpiling and defense production expansion and expenditures on civil defense and selective service (ibid., p. 175).

Government administration includes government purchases of goods and services (ibid.) less expenditures for national defense, nonmilitary public construction, nondefense equipment purchases, and current expenditures on health and education; and plus civil defense and selective service expenditures.

United States, adjusted prices.—The distribution by end use of indirect business taxes was estimated by analyzing their composition and assigning to consumption Federal and State excise taxes on liquor and tobacco and most other Federal excise taxes, which are levied primarily on consumers' goods. Approximately half of all property taxes were estimated to be on residential property and therefore falling on consumption. The remaining indirect taxes were distributed among the end uses in the same proportion as the shares of the end uses in total GNP at established prices.

Both business transfer payments and subsidies were assigned to consumption. The statistical discrepancy was assigned to investment, in accordance with Department of Commerce practice (ibid., p. 116).

For both countries, the investment category comprises gross investment in construction and equipment and changes in inventories, including stockpiling and investment in defense production facilities, but excluding direct military construction and military equipment purchases. The U.S. figure includes net foreign investment, which is excluded from the figure for the U.S.S.R. for lack of data.

The defense category includes for the United States, and is believed to include for the U.S.S.R., the following: Pay, subsistence, and other current operational expenditures of the armed forces, military construction and equipment expenditures, military research and development expenditures, and atomic energy expenditures. For both countries, it excludes military pensions, which are considered transfer payments and accordingly excluded from gross national product. The figures for the U.S.S.R. include militarized internal security forces, such as border troops, for which there is no U.S. counterpart. The figures for the United States include, while those for the U.S.S.R. probably exclude, foreign military assistance and the cost of maintaining forces abroad. Soviet defense expenditures would, therefore, be understated relative to those of the United States. However, it should be noted that much of the cost of maintaining Soviet troops in Eastern Europe has been borne by the respective satellite countries, which have thus provided an offsetting form of reverse military assistance to the U.S.S.R.

The government administration category for both countries is essentially a residual of current government expenditures on goods and services not included in the other three categories. The figures for the U.S.S.R. exclude the cost of administering state-owned enterprises, as these overhead costs of enterprise management are included in product prices and appear, as in the U.S. figures, in the figures for the end uses to which these products correspond. However, the figures for the U.S.S.R. include expenditures of the Communist Party, which serves as a key arm of government administration and control in the U.S.S.R., and expenditures on nonmilitarized internal security activities, some of which have no counterpart in the United States.

Because the figures for the U.S.S.R. are derived from a national accounts study which (like all such studies for the U.S.S.R.) involves many estimates of varying reliability, they should be regarded as estimates intended to provide a fairly reliable, but by no means fully precise, indication of the pattern of resource allocation in the U.S.S.R. The consumption and investment figures may be considered

to have a relatively high degree of reliability, because a substantial amount of data is available on these activities. On the other hand, the defense figure is necessarily more tenuous because of the need to make estimates for many items regarding which the Soviet Government discloses little or no information. The Government administration figure, being a residual of uncertain coverage, also is less reliable than the figures for consumption and investment, but its small size makes its deficiencies much less serious than in the case of the defense category.

In table 1, the distribution of Soviet and United States national product in 1955 among these four end-use categories is shown both at established prices and at adjusted prices. A comparison at established prices, however, does not adequately indicate the difference between Soviet and United States resource allocation patterns. A somewhat more accurate contrast is shown at adjusted prices, which attempt to exclude indirect taxes (which, although part of established prices, are not payments to factors of production) and to include subsidies (which are payments to factors of production not included in established prices). The resulting adjusted prices, intended to approach more closely a factor cost basis of valuation, depict more faithfully the distribution of resources among these end uses in the two countries.[5]

The effect of the adjustment is slight for the United States, where both indirect taxes and subsidies are of minor importance in the gross national product at established prices. For the U.S.S.R., however, the effect of the adjustment is striking, because indirect taxes account for over one-fourth of the gross national product at established prices and because they fall principally on the consumption end use, as a result of the heavy reliance of the Soviet budget on the turnover tax, an excise constituting about half of the value of state and cooperative retail sales. Subsidies, which were modest in 1955, also fell more heavily on consumption than on the other end uses in 1955, although this was not true in some earlier years, for example, 1948.[6] As a result of the importance and differential impact of indirect taxes, the share of consumption is much higher and the shares of investment and defense are significantly lower at established prices than at adjusted prices.

A comparison of resource allocation patterns at adjusted prices (cols. 4 and 8 of table 1) shows that in 1955 the U.S.S.R., in comparison with the United States, devoted a significantly greater share of its productive resources to investment (25 versus 20 percent) and defense (13 versus 10 percent) and a significantly smaller share to consumption (59 versus 66 percent). About the same share of resources went for general government administration in both countries.

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[5] These adjustments follow the method developed in Bergson's "adjusted factor cost" approach: see Bergson, op. cit., ch. 4, and app. E. and Bergson and Heyman, op. cit., ch. III and app. D. Although these adjustments constitute only an approximation to a depiction of factor allocation in the U.S.S.R. because of many problems connected with the valuation of the services of land, capital, and enterprise in the Soviet setting, I believe they represent an improvement over the unadjusted established prices. For discussion of these problems, see the references just cited and also Peter Wiles, "Are Adjusted Rubles Rational?" Soviet Studies, vol. VII, No. 2, October 1955, pp. 143–160; Franklyn D. Holzman, "The Adjusted Factor Cost Method of Valuing National Income: Comment," Soviet Studies, vol. VIII, No. 1, July 1956, pp. 32–36; and ECE, op. cit., p. 94.

[6] See Bergson and Heymann, loc. cit.

National income by sector of origin

An alternative view of the difference in resource allocation patterns in the U.S.S.R. and the United States in 1955 is given in table 2. This table shows the distribution by sector of origin of factor incomes generated in the production of total national output in each country. The figures for the U.S.S.R., and the United States are, however, not strictly comparable, because of a difference in the national income concepts used for the two countries, which arises from the difficulties of valuing the return to property factors in the U.S.S.R.[7] A serious shortcoming of the calculation for the U.S.S.R. is the inadequate allowance for land rent and the consequent substantial understatement of the contribution of agriculture to Soviet national income. As a result, the percentage figures for the U.S.S.R. in table 2 understate the share of agriculture, and overstate the shares of the other sectors, in total Soviet national income.

With this caution in mind, one can nevertheless draw certain conclusions from table 2 regarding differences in the use of resources in the two countries in 1955. The most striking conclusion is the much greater share of total resources engaged in agriculture in the U.S.S.R. This conclusion is confirmed by the much greater share of the agricultural labor force in the total labor force in the U.S.S.R., as compared with the United States, and reflects the inefficiency of Soviet agriculture relative to U.S. agriculture. Another prominent difference between the two countries concerns the share in national income of services and trade. The much larger share in the United States reflects the orientation of the U.S. economy toward the satisfaction of household demand for goods and services. In the U.S.S.R., on the other hand, consumer services and retail trade facilities have been sacrificed in favor of investment and defense production. Finally, in 1955, the U.S.S.R. devoted a somewhat smaller share of its resources to industry and construction and to transportation and communications than did the United States.

TABLE 2.—*National income by sector of origin in the U.S.S.R. and the United States, 1955* [1]

Sector	U.S.S.R.[2]		United States [3]	
	Billion rubles	Percent of total	Billion dollars	Percent of total
Industry and construction	332.0	36.6	134.5	40.7
Agriculture	245.7	27.1	15.2	4.6
Transportation and communications	45.5	5.0	21.2	6.5
Services and trade	283.3	31.3	159.2	48.2
National income	906.5	100.0	330.2	100.0

[1] Components may not add to totals, because of rounding.
[2] National income includes wages, salaries, and other cash household income, income in kind, contributions for social insurance, and profits.
[3] National income includes wages and salaries and supplements to wages and salaries, proprietors' income of unincorporated businesses, rental income of persons, corporate profits, and net interest.

Sources: U.S.S.R.-Bornstein, "Soviet National Accounts for 1955." U.S. Department of Commerce, "U.S. Income and Output." p. 131.

[7] The calculation for the U.S.S.R. essentially follows the approach of Bergson, op. cit., app. C. Although the profits component in the present national income calculation for the U.S.S.R. contains some elements of rent and interest on capital, it clearly does not represent them adequately, either in total magnitude or in distribution by sector.

COMPARATIVE SIZE OF NATIONAL PRODUCT

In order to compare the size of Soviet and U.S. national product, the national product figures calculated in native currencies must be expressed in a common currency, either dollars or rubles. In essence, the task is to price Soviet output at U.S. dollar prices and/or to price U.S. output at Soviet ruble prices. In practice, this is done by using international price deflators to convert the Soviet national product figures in rubles to dollars, and/or to convert the U.S. national product figures in dollars to rubles.

Foreign exchange rates are unsuitable as price deflators for such comparisons because they fail, for a number of well-known reasons, to measure the internal purchasing power of currencies, even in the case of market economies whose structure and pricing practices are broadly similar.[8] Because the official Soviet exchange rate is arbitrary and not intended to measure the relationship between foreign and domestic prices, it is particularly inappropriate for international comparisons of national product.

For a comparison of the size of Soviet and United States national products, it is necessary instead to use international price deflators which measure the internal purchasing power equivalents of the ruble and the dollar in purchasing the goods and services composing national product. The first step in obtaining these deflators is to derive ruble-dollar (or dollar-ruble) price ratios for individual products by comparing their internal prices in the U.S.S.R. and the United States. Then the ruble-dollar price ratios for individual items are aggregated into ruble-dollar ratios for categories of national product, such as consumption and investment. For this aggregation, it is possible to use as a basis for weighting individual items either their relative importance in Soviet national product or their relative importance in U.S. national product. In the former case, the aggregate ratios are said to be Soviet weighted; in the latter, United States weighted.

Table 3 presents the results of an effort to compare the size of Soviet and U.S. national product in 1955 by this method. It compares the national products both in rubles and in dollars. The ruble figures for the U.S.S.R. were taken from table 1, while the ruble figures for the United States were obtained by converting the dollar figures for the United States in table 1 to rubles by appropriate ruble-dollar ratios. Similarly, the dollar figures for the United States are from table 1, while the dollar figures for the U.S.S.R. were obtained by converting the ruble figures for the U.S.S.R. in table 1 into dollars by appropriate dollar-ruble ratios. In both cases, the comparisons involve the established price figures, rather than the adjusted price figures, in table 1 because their purpose is to compare the output of goods and services entering national product in the two countries, rather than the quantities of factor inputs devoted to the production of national product in the two countries. In the figures taken directly from table 1, output is valued at established prices in each country. Where ruble-dollar (or dollar-ruble) ratios have been applied to figures in table 1 to obtain those in table 3, these ratios were constructed

[8] See Milton Gilbert and Irving B. Kravis, "An International Comparison of National Products and the Purchasing Power of Currencies," Paris, Organization for European Economic Cooperation (OEEC), 1954, pp. 14–17; and Milton Gilbert and Associates, "Comparative National Products and Price Levels," Paris, OEEC, 1958, pp. 29–33.

by comparing established ruble and dollar prices for individual items and aggregating the results by using established price weights.[9]

TABLE 3.—*Comparison of gross national product of the U.S.S.R. and the United States, at established prices, in rubles and dollars, 1955* [1]

End use	Ruble comparison			Dollar comparison			Geometric average of ruble and dollar comparisons
	U.S.S.R. (billion rubles)	United States (billion rubles)	U.S.S.R. as percent of United States	U.S.S.R. (billion dollars)	United States (billion dollars)	U.S.S.R. as percent of United States	U.S.S.R. as percent of United States
Consumption	840.8	4,045.5	20.8	105.1	269.7	39.0	28.5
Investment	263.5	540.4	48.8	52.7	77.2	68.3	57.7
Defense	144.6	192.0	75.3	36.2	38.4	94.3	84.3
Government administration	36.9	24.2	152.5	18.4	12.1	152.1	152.3
Gross national product	1,285.8	4,802 1	26.8	212.4	397.5	53.4	37.8

[1] Components may not add to totals, because of rounding.

SOURCES AND DERIVATION

Ruble figures for U.S.S.R. and dollar figures for United States are from table 1.

Ruble figures for United States were obtained by multiplying dollar figures for United States in table 1 by a U.S.-weighted ruble-dollar ratio for each end use, computed as

$$\frac{\sum\left(\frac{Ps}{Pu}\cdot PuQu\right)}{\sum PuQu},$$

and dollar figures for the U.S.S.R. were obtained by multiplying ruble figures for the U.S.S.R. in table 1 by a Soviet-weighted dollar-ruble ratio for each end use, computed as

$$\frac{\sum\left(\frac{Pu}{Ps}\cdot PsQs\right)}{\sum PsQs},$$

where Ps and Pu represent Soviet and U.S. prices, respectively, and Qs and Qu represent Soviet and U.S. quantities, respectively.

The ruble total for the United States and the dollar total for the U.S.S.R. are the sum of their respective components.

Ruble-dollar ratios for consumption of 15 rubles per dollar with U.S. weights and 8 rubles per dollar with Soviet weights were estimated as follows. Aggregate ruble-dollar ratios in 1954 prices for household consumption of food products, nonfood consumers' goods, and services are available with 1950 U.S. weights in Norman M. Kaplan and Eleanor S. Wainstein, A comparison of Soviet and American Retail Prices in 1950, RM-1692-1, Santa Monica, Calif., The Rand Corp., 1956, p. 28, and with 1954 Soviet weights in idem, An Addendum to Previous U.S.S.R.-United States Retail Price Comparisons, RM-1906, Santa Monica, Calif., The Rand Corp., 1957, p. 3. The pertinent Soviet prices did not change from 1954 to 1955, according to Tsentral'noe Statisticheskoe Upravlenie, Sovetskaia torgovlia (Soviet Trade), Moscow, Gosstatizdat, 1956, p. 132. The ratios were adjusted, however, for U.S. price changes from 1954 to 1955 from data in Department of Commerce, U.S. Income and Output, p. 228. Two further calculations were made to take account of items in the consumption end use not covered by the Kaplan-Wainstein studies. First, their ruble-dollar ratios for food products, which consider for the U.S.S.R. only prices of state and cooperative retail outlet, were adjusted to take into account information regarding the higher prices prevailing on the collective farm market in the U.S.S.R. in TsSU, op. cit., pp. 133-134; and data on the relative importance of the former and latter marketing channels in total Soviet food purchases, in TsSU, Narodnoe khoziaistvo SSSR v 1956 godu (National Economy of the U.S.S.R. in 1956), Moscow, Gosstatizdat, 1957, p. 228. Second, ruble-dollar ratios for health and education expenditures in the consumption end use were estimated. Ruble-dollar ratios for the wage component of these outlays were estimated from data on Soviet health and education wages in Bornstein, Soviet National Accounts for 1955, and from data on U.S. health and education

[9] Thus, in this comparison no adjustment was made for indirect taxes and subsidies in either the national product figures or the ruble-dollar ratios. For a comparison of inputs, factor costs should be used both for value of product and for the construction of ruble-dollar ratios. To obtain such factor cost ruble-dollar ratios, individual established ruble and dollar prices should be adjusted to exclude indirect taxes and include subsidies. Cf. Gilbert and Kravis, op. cit., pp. 91-92. Although rough adjustments of this type can be made for the U.S.S.R. for broad categories of national product, as was done in connection with table 1, data are lacking for similar adjustments of individual ruble prices.

incomes in Department of Health, Education, and Welfare, Public Health Service, Health Manpower Chart Book Public Health Service publication No. 511, Washington, 1957, pp. 11, 13, 57; Department of Commerce, Office of Business Economics, National Income, Washington, Government Printing Office, 1954, p. 201; Survey of Current Business, July 1957, pp. 19–21; and Journal of the American Dental Association, December 1956, p. 719. In addition to wage outlays, health and education expenditures in the consumption end use include outlays for materials inputs, such as supplies, food, heat, and electricity. In the absence of data on the specific composition of these materials inputs, the ruble-dollar ratios for household consumption of food products, nonfood consumers' goods, and services were used for health and education materials inputs. Finally, the ratios for the various components of the consumption end use were combined into aggregate U.S.-weighted and Soviet-weighted ratios for the category.

For the investment end-use category, very rough ruble-dollar ratios of 7 rubles per dollar with U.S. weights and 5 rubles per dollar with Soviet weights were estimated as follows. For producers' durables, a U.S.-weighted ratio of 6 rubles per dollar and a Soviet-weighted ratio of 4 rubles per dollar were taken, on the basis of the estimates of Abraham S. Becker, Prices of Producers' Durables in the United States and the USSR in 1955, Santa Monica, Calif., The Rand Corp., 1959, RM-2432, pp. 47–48. In the absence of a comparable ruble-dollar ratio study for construction, it was more or less arbitrarily estimated that the construction ratios would approximate 8 rubles per dollar with U.S. weights and 6 rubles per dollar with Soviet weights, on the basis of scattered evidence, such as a comparison of thermal electric plant construction in the U.S.S.R. and the United States (Soviet data in Elektricheskii Stantsii, No. 11, 1956, pp. 26–28; No. 2, 1958, pp. 46–53; No. 3, 1958, pp. 39–44; and U.S. data in Tennessee Valley Authority, Engineering Data, TVA Steam Plants, technical monograph No. 55, vol. 2, ch. 1, p. 8, and ch. 6, pp. 10–18). Because of the lack of data on the composition of inventories and because of the relatively small share of inventories in total investment in both countries, no effort was made to estimate ratios for this component of investment. The aggregate ratios for the investment end-use category therefore were obtained by combining the producers' durables and construction ratios according to each country's weights.

For the defense end use, rough aggregate ratios of 5 rubles per dollar with U.S. weights and 4 rubles per dollar with Soviet weights were obtained as follows. A ratio for military pay was calculated by comparing average annual Soviet military pay, in Bornstein, op. cit., with similar data for the United States, in Department of Commerce, Bureau of the Census, "Statistical Abstract of the United States, 1957," Washington, Government Printing Office, 1958, p. 241. Ratios for subsistence were estimated by adjusting downward the household consumption ratios, to take into account the greater relative importance in the military subsistence "basket" of items, such as food products, with lower ruble-dollar ratios. For the remaining components of this end use, such as procurement, operations, and research and development expenditures, the ratios for producers' durables were used, on the assumptions that weapons, with inputs rather similar to those of producers' durables, would have similar ratios and that higher ratios for some of the other items would be offset by lower ratios for others. Aggregate ratios were then derived with each country's weights.

For the Government administration end use, a ratio of 2 rubles per dollar was obtained by comparing the average wage of production and office employees in the U.S.S.R. (in Bornstein, op. cit.) with the average wage of Federal, State, and local government employees, excluding those in State and local education, in the United States (from data in "Survey of Current Business," July 1957, pp. 20–21). This ratio was used both to convert Soviet ruble figures to dollars and to convert U.S. dollar figures to rubles, in the absence of data from which to derive adequate weighted ratios based on each country's weights.

In examining the results shown in table 3, it should be remembered that they are offered only as approximate indications of the relative size of the two national products and their major end-use components. All of the problems and qualifications mentioned in connection with the derivation of the established price figures in table 1 of course apply also to table 3. In addition, the precision of the results in table 3 is limited by the rough character of the ruble-dollar ratio conversions, stemming from the problems encountered in obtaining price data, in matching Soviet and U.S. goods and services, and in deriving satisfactory weights.[10]

In the comparison of gross national product and its chief end-use components in table 3, the size of the U.S.S.R. relative to the United States differs considerably depending on whether the comparison is made in rubles (i.e., at Soviet prices) or in dollars (i.e., at U.S. prices). This difference is simply a manifestation of the fundamental index number problem encountered in both intertemporal and international comparisons and arising from the existence of alternative but equally appropriate weighting systems, corresponding to the Paasche and Laspeyres formulae.[11] Even the extent of the disparity

[10] The methodology and problems involved in ruble-dollar ratio calculations are discussed in Norman M. Kaplan and William L. White, "A Comparison of 1950 Wholesale Prices in Soviet and American Industry," RM-1443, Santa Monica, Calif., the Rand Corp., 1955; Norman M. Kaplan and Eleanor S. Wainstein, "A Comparison of Soviet and American Retail Prices in 1950," RM-1692-1, Santa Monica, Calif., the Rand Corp., 1956; and Abraham S. Becker, "Prices of Producers' Durables in the United States and the U.S.S.R. in 1955," Santa Monica, Calif., the Rand Corp., 1959, RM-2432. For an extensive discussion of the construction of similar price deflators for Western Europe and the United States, see Gilbert and Kravis, op. cit., and Gilbert & Associates, on cit.

[11] Likewise, there are two sets of answers for the relative purchasing power of the ruble and the dollar in regard to national product, depending on whether the price relationships between the two countries are weighted by the relative quantities of goods and services in Soviet or in U.S. national product.

in results, attributable to differences in the two price structures, is not unexpected. A substantial, although not so great, spread was also found, as a result of differences in price structures, in a comparison of the national products of various Western European countries with that of the United States at their own prices and at U.S. prices.[12]

Likewise, it is not surprising that, for national product as a whole and for its components (except for Government administration),[13] the U.S.S.R. is smaller relative to the United States in the ruble comparison than in the dollar comparison. The explanation lies basically in a negative correlation between the relative prices and relative quantities; that is, goods which have lower relative prices tend to be produced in greater relative quantities in a country. Thus, goods and services with lower relative prices in the United States are, on the average, those which are relatively more abundant in the United States, as compared with the U.S.S.R.; an analogous situation prevails in the U.S.S.R. Consequently, when the two national products are valued at U.S. prices, a greater price weight is given to goods which are relatively more heavily produced in the U.S.S.R. than if Soviet prices are used. Similarly, when the two national products are valued at Soviet prices, a greater weight is given to items which are relatively more heavily produced in the United States, than if U.S. prices are used.[14] When one country's output structure is priced at the other country's price structure, the effect is to apply relatively high prices to relatively large quantities and relatively low prices to relatively small quantities. Thus, the comparison is more favorable to a country when the other country's prices are used for both.[15]

The existence of such a substantial disparity between the results of the ruble and dollar comparisons makes it inadvisable to use either one alone to depict the relative size of the two national products. Preferably, both comparisons should be used. However, because it is sometimes considered cumbersome to deal with two sets of compari-

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[12] Gilbert & Associates, op. cit., pp. 97–106.

[13] Where separate U.S.-weighted and Soviet-weighted ratios were not used; see notes to table 3.

[14] See in this connection the results of Kaplan and Wainstein, op. cit., pp. 30–31, for the U.S.S.R. relative to the United States; and Gilbert and Kravis, op. cit., pp. 51–59, and Gilbert & Associates, op. cit., pp. 23–24, for several Western European countries relative to the United States.

[15] A quite different matter is involved when a calculation is made of the shares of the various end uses in a country's national product expressed in another country's currency. The results are likely to differ from the shares in a native currency calculation because of differences in the ratios at which the various end uses are converted from the native to the foreign currency (see notes to table 3). Thus, these shares of the several end uses in Soviet gross national product expressed in dollars in table 3 differ from their shares in Soviet gross national product expressed in rubles in the same table (and also from their shares in Soviet gross national product at adjusted rubles prices in table 1). The usual purpose of calculating the shares of end uses in total product is to measure resource allocation patterns in terms of the country's own price structure (at established or adjusted prices), as in table 1. The economic meaning of a calculation of end-use shares in terms of a foreign price structure is not clear. Under certain assumptions, however, the results may be of interest. For example, if U. S. prices were considered more "rational" (i.e., more indicative of scarcity relationships) for the U.S.S.R. than Soviet prices, then the shares of the end uses in Soviet gross national product in dollars would be regarded as more accurately reflecting their true relative importance. This is essentially the position of Colin Clark and Julius Wyler; see Clark, "The Conditions of Economic Progress," 2d ed., London, Macmillan, 1951, ch. IV, and 3d ed., London, Macmillan, 1957, ch. IV; and Wyler, "The National Income of Soviet Russia," Social Research, vol. 13, No. 4, December 1946, pp. 501–518, and "Die Schätzungen des sowjetrussischen Volkseinkommen," Schweizerische Zeitschrift für Volkswirtschaft und Statistik (Zurich), vol. 87, Nos. 5–6, 1951, pp. 1–35. While a dollar valuation of Soviet national product is of course of interest, and in fact necessary, for a comparison of the size of Soviet and United States national products, it is by no means clear that it provides a more reliable basis, than some (adjusted) ruble valuation, for measuring the resource allocation pattern at a given time or the real growth over time of Soviet national product. See Bergson, op. cit., pp. 53–54, and Abram Bergson, "National Income of the Soviet Union," Report No. A–5, Washington, Council for Economic and Industry Research, Inc., 1954, pp. 23–24.

sons, resort is sometimes made to an average of the results produced by the two sets of weights, such as the geometric averages in table 3. Such averages are convenient for various practical purposes, but it should be recognized that they have no unambiguous economic meaning. Where averages alone are presented, they may conceal a significant difference in results, corresponding to substantially different price structures, as in the case of Soviet-United States comparisons. Although the use of averages is often convenient for the sake of simplicity or brevity, a more precise discussion involves reference to both of the original comparisons.

The results in table 3 indicate that in 1955 Soviet gross national product was about one-fourth the U.S. level at Soviet ruble prices and about one-half the U.S. level at U.S. dollar prices. The geometric average of the ruble and dollar comparisons is about two-fifths. The relative size of the two economies (whether compared at Soviet or U.S. prices) differs, however, in regard to the several end-use components of national product.

Aggregate Soviet consumption was about one-fifth of the U.S. level at Soviet prices and about two-fifths at U.S. prices. If allowance is made for the 20 percent difference in population—about 200 million in the U.S.S.R. and 165 million in the United States in 1955—the respective per capita figures are even lower, approximately one-sixth and one-third. Such comparisons for consumption as a whole, however, conceal different relationships between the two countries regarding the various components of consumption, such as food, clothing, durable consumers' goods, etc. For example, Soviet per capita consumption levels are significantly closer to those of the United States in regard to food and basic types of clothing than they are in regard to durable consumers' goods, housing, and personal services.

In the case of investment, Soviet product was substantially larger relative to U.S. product than in the case of consumption; it was about half of the U.S. level at Soviet prices and about two-thirds at U.S. prices. The spread between the ruble and dollar results is not so great as for consumption, indicating less difference in the Soviet and U.S. price structures for investment goods than for consumption goods. As in the case of consumption, however, the aggregate nature of the investment comparison obscures important differences in the relationship between the two countries in regard to different types of investment. Because of the emphasis of the Soviet regime on economic growth, a much larger share of investment is devoted to industry, and a much smaller share to housing and consumer services, in the U.S.S.R. than in the United States. As a result, in 1955 Soviet investment in manufacturing, mining, and public utilities was larger, and Soviet investment in housing was smaller, relative to the U.S. level than the relationship for aggregate investment shown in table 3.

According to table 3, Soviet defense outlays in 1955 were about three-fourths of the U.S. level at Soviet prices and almost equal at U.S. prices. However, because of the especially crude nature of both the initial national accounts estimate for Soviet defense expenditures and the ruble-dollar ratios for this end use, it seems prudent to allow for some understatement of the Soviet level both in rubles and in dollars and to consider Soviet defense outlays as approximately equal to those of the United States. Even if aggregate Soviet and U.S.

outlays for defense are considered equal, however, it does not follow that the size, equipment, or effectiveness of the two military establishments is equal, for a number of reasons.

As in the case of the consumption and investment comparisons, the composition of the defense aggregate must be considered. Although total defense outlays may be equal in the two countries, the same relationship of equality obviously does not apply to all components of defense. The relationship of the two countries certainly differs in regard to troop strength and the various types of missiles, aircraft, ships, and other weapons. In a military contest, Soviet or U.S. superiority in one or more of these component categories of defense could be decisive, despite an accompanying inferiority in other categories. Other cautions must also be kept in mind in appraising national product comparisons of defense. For example, although Soviet and U.S. soldiers are, in this type of comparison, priced at the same pay rates, their productivity (i.e., combat effectiveness) may in fact not be the same. Also, because Soviet soldiers live more modestly than U.S. soldiers, Soviet subsistence outlays per man are less than U.S. outlays. Yet it should not be concluded from such a comparison that the effectiveness of Soviet soldiers is correspondingly below that of their U.S. counterparts. Instead, the U.S.S.R. may in fact support an equally effective soldier at less real cost in terms of resources devoted to his subsistence.

Comparisons of the relative size of the defense components of national product thus do not provide a sufficiently reliable index of the military strength of the two countries. For such an appraisal, other comparisons—of manpower, training, equipment, weapons technology, etcetera—are indispensable. The national product comparison does, however, furnish some corroborative evidence of the relative magnitude of the military programs of the two countries. The conclusion indicated by table 3, of an approximately equivalent military program in the two countries, seems consistent with other information on this question.

Little need be said about Government administration, the residual category in table 3. Outlays for the administrative apparatus concerned with planning, administration, and control in the U.S.S.R. far exceeded Government administration outlays in the United States, where some of the planning and control functions of the U.S.S.R. have no counterpart.

The general conclusions suggested by table 3 may now be summarized briefly in terms of the geometric average results. Although in 1955 the U.S.S.R. had a national product less than half that of the United States, the U.S.S.R. had an approximately equal defense effort and a level of investment about three-fifths that of the United States. In contrast, per capita consumption in the U.S.S.R. was only about one-fourth that in the United States. This performance reflects the desire of the Soviet regime for a strong and advanced military posture and a rapid rate of growth, and its willingness to pursue these objectives at the expense of the consumption level of the population.

GROWTH OF NATIONAL PRODUCT

In order to compare trends in the growth of national product in the U.S.S.R. and the United States, it is desirable to have for both

countries data on national product and its components in constant prices for a series of years. Such data are published for the United States by the Department of Commerce, but comparable data are lacking for the U.S.S.R. Although national product accounts for the U.S.S.R. in current prices are now available for a number of years,[16] they have as yet not been deflated by appropriate price indexes to obtain a constant-price series.

In the absence of such a series, an effort was made for this paper to estimate the growth of Soviet national product from 1950 to 1958 by a sector-of-origin approach. Estimates of the growth of output in the principal sectors of the economy were combined into an aggregate index on the basis of the relative importance of the sectors in national product in 1955. This calculation must be regarded as very rough, because of the difficulties involved in establishing proper sector weights, the use of gross output rather than net output indicators, and the estimates necessary to obtain the indicators used.[17]

In table 4, these results are compared with an index for the United States derived from Department of Commerce data. In table 5, growth trends of Soviet and U.S. national product are shown in terms of average annual rates of growth, derived from table 4. In order to stress the approximate nature of the calculations for the U.S.S.R., the Soviet growth rates in table 5 are shown as ranges, within which the growth rates implicit in the estimated index in table 4 fall.

TABLE 4.—*Indexes of gross national product in the U.S.S.R. and the United States, selected years, 1950–58*

	U.S.S.R.[1]	United States[2]
1950	100	100
1955	137	124
1958	170	125

[1] Index of gross national product (GNP) at factor cost. GNP at factor cost=GNP at established prices—indirect taxes + subsidies.
[2] Index of GNP at market prices.

SOURCES AND DERIVATION

U.S.S.R.: The index was constructed by aggregating sector indexes according to their weights in Soviet GNP at factor cost in 1955. The resulting index is shown in the table with 1950 as a base.

The sector weights were obtained by adding estimates of sector depreciation charges to figures for national income by sector of origin in Bornstein, op. cit., summarized in table 2. These charges were estimated by sector from data on amortization rates and capital stock and on the share of amortization charges in total production costs, in various Soviet sources.

For industry, the gross output index of Shimkin (Demetri B. Shimkin and Frederick A. Leedy, "Soviet Industrial Growth," Automotive Industries, vol. 18, No. 1, Jan. 1, 1958, p. 51) was used in preference to the Nutter index of all industrial output (G. Warren Nutter, "Industrial Growth in the Soviet Union," American Economic Review, vol. 48, No. 2, May 1958, p. 402) because the former includes and the latter excludes as estimate for military end items, which are an important component of Soviet industrial production. Although Shimkin uses 1934 value-added weights, based on Hodgman's work, these weights apparently do not yield much different results from 1955 price weights (see Joseph S. Berliner, "Capital Formation and Productivity in the U.S.S.R.," in The Economy of the U.S.S.R., National Academy of Economics and Political Science, Special Publications Series, No. 14, Washington .1958, p. 6). The Shimkin index was

[16] See references in footnote 4.
[17] The construction of the index is discussed in the notes to table 4. The index is for gross national product at factor cost, rather than gross national product at established prices, because only an estimate for depreciation charges was added to the sector figures for national income to obtain sector weights, inasmuch as it was not possible to allocate indirect taxes and subsidies by sector of origin. If it is assumed that the sector weights in gross national product at established prices do not differ greatly from the respective sector weights in gross national product at factor cost, and that the net output indexes are similar to the gross output indexes, then the index for gross national product at established prices will not vary greatly from the present index for gross national product at factor cost. These assumptions do not appear implausible for the short period covered by this calculation.

extended from 1956 to 1958 on the basis of the results for 1956–58 of the official Soviet index and the relationship of the official Soviet index for 1950–56 and the Shimkin index for 1950–56.

For construction, the index used was based on the official Soviet series for state construction work (Vestnik statistiki, No. 4, 1959, p. 93) adjusted slightly to take into account collective farm construction.

The index used for agriculture is the index of Soviet agricultural output net of farm uses (such as seed and feed) based on 1958 prices prepared by Prof. D. Gale Johnson and Mr. Arcadius Kahan. This and alternative indexes prepared by them are presented in their contribution to the present Joint Economic Committee study. They kindly furnished me their results before publication.

For transportation, an index was constructed by weighting ton-kilometer data for the several types of transportation (in Vestnik statistiki, No. 4, 1959, p. 91) by their respective contributions to national income in 1955 (in Bornstein, op. cit.).

The trade index is a composite of a wage bill index, based on employment in state and cooperative trade, and a profits index, based on deflated state and cooperative retail sales. The former was estimated from data in TsSU, Sovetskaia torgovlia, pp. 113–114; TsSU, Narodnoe khoziaistvo SSSR v 1956 godu, pp. 204–205; and TsSU, SSSR v tsifrakh ("The U.S.S.R. in Figures"), Moscow, Gosstatizdat, 1958, p. 313. The latter was estimated from data in TsSU, Narodnoe khoziaistvo SSSR v 1956 godu, pp. 232–233; Sovetskaia torgovlia (magazine), No. 3, 1958, p. 4; Vestnik statistiki, No. 9, 1958, p. 88; and Pravda, Jan. 16, 1959.

For the services sector, indexes of employment were used for health and education (from data in TsSU, Narodnoe khoziaistvo SSSR v 1956 godu, pp. 204–205, and TsSU, SSSR v tsifrakh, p. 313), and a rough estimate of trends in armed forces manpower (based on scattered estimates of Western observers, such as Hanson W. Baldwin, "The Great Arms Race," New York, Praeger, 1958, pp. 37–38) was used for military services.

United States: Index calculated from series for GNP in 1954 dollars in Survey of Current Business, July 1959, pp. 6–7.

TABLE 5.—*Average annual rates of growth of gross national product in the U.S.S.R. and the United States, 1950–58*

	U.S.S.R.	United States
1950–55	6–7	4.3
1955–58	7–8	.5
1950–58	6.5–7.5	2.9

SOURCES AND DERIVATION

U.S.S.R.: Estimated on the basis of table 4, as explained in text.

United States: Computed from original figures, for the terminal years indicated, in the source cited for table 4.

The general conclusion indicated by the comparisons in these tables is striking. Even if allowance is made for the possibility of some overstatement of the Soviet growth rate, it is clear that Soviet national product has grown much more rapidly than U.S. national product in the periods indicated. Comparative growth trends shown for the 1955–58 period are particularly favorable to the U.S.S.R. and unfavorable to the United States, because in 1958 Soviet gross national product was exceptionally high as a result of an extraordinary harvest, while U.S. gross national product showed the full effects of the recent recession in business activity. The comparison for the 1950–55 period probably shows growth rates more representative of a high level of activity in both countries. The comparison for the 1950–58 period, on the other hand, understates the longer term U.S. growth rate somewhat, because it includes the recent recession but not the subsequent recovery from it. A rate of 3 to 4 percent is thus more representative of U.S. national product since 1950. Taking these various factors and qualifications into account, it nevertheless appears that since 1950 Soviet national product has been growing at approximately twice the U.S. rate—at an average annual rate of over 6 percent as compared with a rate of over 3 percent for the United States. These rates apparently represent a continuation of differential trends observed in the growth of Soviet and U.S. national product in the last three decades. A growth rate of 5 to 7 percent has been estimated for the U.S.S.R. during the "more normal" years of this period by various

authors,[18] while the U.S. long-term growth rate since 1929 has been between 3 and 4 percent.[19]

As a result of its more rapid growth, Soviet national product has been increasing in size relative to U.S. national product. By combining the figures in table 4 with those in table 3, it is possible to derive an estimate of the change in the relative sizes of Soviet and U.S. national product from 1950 to 1958. In a ruble comparison, Soviet gross national product increased from about one-fifth the U.S. level in 1950 to about one-third in 1958. In a dollar comparison, it rose from a little less than half the U.S. level in 1950 to almost two-thirds in 1958. In terms of the geometric average of the two types of comparisons, Soviet gross national product grew from about one-third the U.S. level in 1950 to a little less than half the U.S. level in 1958. Inasmuch as Soviet gross national product was exceptionally high and U.S. gross national product was depressed in 1958, a 1958 comparison is particularly favorable to the U.S.S.R., as noted above. However, the increase in the relative size of Soviet national product compared to U.S. national product basically reflects the more rapid growth of the Soviet economy.

The reasons for the rapid growth of Soviet national product since 1950 have been analyzed in detail elsewhere and need only be summarized briefly here, as a basis for an estimate of future growth trends.[20] Primary among the factors responsible are the rate and composition of Soviet investment. Not only have the rates of Soviet gross and net investment been high, but, moreover, Soviet investment has been directed mainly toward heavy industry rather than toward consumers' goods industry, agriculture, housing, and consumer services.

Another factor of importance was the rapid growth of the nonagricultural labor force, chiefly from population increase, with little transfer from agriculture (in contrast to the prewar industrialization period and the postwar reconstruction period). In addition, there was continuing technological progress, in part through the adoption of Western technological progress and in part from Soviet technological achievements. Also significant was the increase in agricultural output after Stalin's death, as a result of the expansion of the crop area by more than 20 percent, greater investment in agriculture and greater incentives to the peasants. Finally, explicit recognition should be given to the willingness of the Soviet leadership to restrain Soviet consumption levels in order to pursue the dual objectives of a rapid rate of growth and a strong military posture. In pursuit of these objectives, the Soviet leaders have used fully (though perhaps not always most efficiently) the resources at their disposal, maintaining a very high and steady rate of utilization of labor and capital, without the

[18] Estimates for the U.S.S.R. for 1928–37 and 1948–50 are examined in Gregory Grossman, "National Income," in Abram Bergson (editor) Soviet Economic Growth, Evanston, Ill., Row, Peterson, 1953, pp. 5–11.

[19] Survey of Current Business, July 1959, pp. 6–7.

[20] For a discussion of the factors responsible for past growth, as well as those influencing the future rate of growth, see, Bergson, "Soviet Economic Growth"; Library of Congress, Legislative Reference Service, op. cit.; Gregory Grossman, "Soviet Economy and Soviet World Power," ch. 2 in Columbia University, American Assembly, "International Stability and Progress," New York, 1957; and Grossman's statement in World Economic Growth and Competition, hearings before the Subcommittee on Foreign Economic Policy of the Joint Economic Committee, 84th Cong., 2d sess., Washington, Government Printing Office, 1957, pp. 29–33.

interruptions to production which occur in a market economy such as the United States as a result of business recessions and labor disputes.

It is difficult to estimate with precision what future trends in Soviet national product will be, even for comparatively short periods, such as 5 or 10 years. However, some idea of the probable trend of Soviet national product may be obtained by examining a number of factors in the economy which would tend to depress the rate of growth of national product in the future and, on the other hand, some which would tend to maintain or perhaps even accelerate it.

One set of retarding factors affects investment. The Khrushchev programs to improve the lot of the Soviet consumer by increasing per capita supplies of food and clothing and per capita housing space imply, if not a reduction in the overall rate of investment, a change in its composition which would reduce the share going to the producers' goods industries and increase the shares of agriculture, light industry, and housing. Although investment in the latter increases the output of goods and services, it does not, like investment in the former, provide the means for producing still more investment goods. In addition, as the age of the Soviet capital stock increases, a greater share of gross investment will probably be devoted to replacement of worn out and obsolescent facilities, leaving a smaller share for net investment. Also, investment costs associated with the exploitation of raw materials are likely to increase as it becomes necessary to use lowergrade or less accessible mineral deposits.

In addition, it does not appear likely that the nonagricultural labor force will grow as rapidly in the next few years as in the period since 1950. Annual increments to the labor force will drop sharply in the next 5 years, when the effects of the low birth rates during and shortly after World War II will be felt. In view of the continued emphasis of the Soviet regime on the expansion of agricultural output, no substantial transfer from agricultural to nonagricultural employment seems probable. Moreover, at the same time that annual increments to the nonagricultural labor force are declining, the Soviet regime has promised a reduction in the workweek from 45 to 40 hours by 1962. As a result, no significant increase in the number of man-hours of labor input in the nonagricultural sector appears likely. Thus almost all of the increase in output will have to come from the growth of productivity per man-hour. This will entail not only better job performance but also substantial investment in modernization and automation, intensifying the investment problem described above.

The agricultural sector likewise presents problems for the Soviet economy. A further expansion of the sown area comparable to that obtained during 1954–56 is not possible, because there is virtually no suitable additional land. Increased output will therefore depend on increased yields and on the growth of livestock and dairy production, through increased investment, more efficient management, and greater incentives. It is difficult to estimate how much agricultural output will be increased in the next few years by such measures.

Finally, greater Soviet economic aid to the European satellites, China, and underdeveloped countries outside the bloc may depress the rate of growth of national product, because this aid to a large degree involves the diversion of resources from domestic investment. On the

other hand, the present level of Soviet foreign aid is sufficiently small relative to the level of Soviet investment that a substantial increase in the former could be made without a serious effect on the latter and thus on the rate of growth of Soviet national product.

The factors tending, in contrast, to sustain or accelerate the rate of growth can be listed more briefly, although they should not therefore be considered correspondingly less significant than the retarding factors. Of prime importance is the continued concern of the Soviet regime with economic growth, epitomized in the oft-stated Soviet objective of "catching up with and surpassing the United States in per capita output." In view of this objective, a substantial reduction in the rate of investment, or a drastic shift in its composition, in favor of increased consumption levels seems unlikely. Coupled with a continued high rate of investment will be greater emphasis on improvements in technology and on automation, which will tend to increase productivity and the rate of growth. The U.S.S.R. appears to have both the scientific and technical skills and the machine-bulding capacity to develop and produce advanced equipment and processes for modern, automated industry. Finally, allowance must be made for the possibility of greater efficiency in the planning and administration of the Soviet economy. There is ample evidence of Soviet concern with this element in economic growth in the changes in the past few years in planning methods, the reorganization of industry and agriculture, and the extensive discussions among Soviet economists about improvements in the price system. If these and similar measures are successful in increasing the efficiency of Soviet economic planning and management, they will help maintain or perhaps even raise the Soviet growth rate.

It is difficult to assess the likely future impact of the Soviet military program on the growth of national product. Clearly, the defense end use competes with the investment end use for resources, both in a general way and specifically for the output of such industries as machine-building, metal-working, chemicals, and electronics. If there were an across-the-board reduction in the Soviet military effort, say as a result of a disarmament agreement, the probable effect would be to reallocate resources from defense to investment (and possibly to a lesser degree to consumption and to foreign aid) and thereby to increase the rate of growth. However, if this reduction entailed primarily manpower, while emphasis on the development and production of aircraft, missiles, and atomic weapons continued, the favorable effect on the rates of investment and economic growth would be much less. Similarly, if the U.S.S.R. expanded its efforts in the missile and atomic weapon fields, this would tend to depress the rates of investment and economic growth. Hence, the classification of the Soviet military effort as a retarding or accelerating factor in regard to the future rate of growth of Soviet gross national product depends on which of many possible assumptions one makes about the future scale and nature of this effort.

Where does the balance lie between the factors tending to depress the rate of growth of Soviet national product in the next 5 or 10 years and those tending to maintain or accelerate it? To this writer, it appears that there may be some decline in the average annual rate of growth, say from 7 percent in the 1950–58 period to 6 or 6.5 percent

in the next 5 or 10 years. Even with such a decline, however, the rate of Soviet economic growth would remain high, substantially exceeding a probable U.S. rate of, say, 4 percent.

One consequence of the higher Soviet rate, of course, would be an increase in the size of Soviet national product relative to that of the United States. For example, if it is assumed that Soviet gross national product grows at an average annual rate of 6 percent and U.S. gross national product at an average annual rate of 4 percent, Soviet gross national product would increase from about 46 percent of the U.S. level in 1958 to about 53 percent in 1965.[21]

Such an increase in the size of the Soviet economy compared with that of the United States need not in itself be considered alarming. More important is the significance of a rapid rate of economic growth for the world position of the U.S.S.R. A larger, and rapidly growing, national product will provide the U.S.S.R. a greater economic base for a strong military posture, for further scientific and technical progress, for greater foreign trade and foreign aid, and for an improvement in the living conditions of the Soviet population. Furthermore, an uninterrupted high rate of growth will be prominently cited in Soviet efforts to convince underdeveloped countries that they should emulate the Soviet "model" in their development programs. In all of these ways, a high rate of growth will strengthen the economic, military, and political position of the U.S.S.R. on the world scene. The consequences of this enhanced Soviet position will be of great importance to the United States and the rest of the free world.

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[21] Both percentages are the geometric averages of the respective ruble and dollar comparisons.

NATIONAL INCOME AND PRODUCT OF THE U.S.S.R., RECENT TRENDS AND PROSPECTS

(By Francis M. Boddy, University of Minnesota)

INTRODUCTION

While there has been a growth in the publication of economic information by the U.S.S.R. in recent years, the type of national income and product data that economists have come to depend upon for the study of economic structure and growth in the United States and Western European countries is not published by the U.S.S.R.

The result is that we must depend on the research specialists in this area to put together painstakingly the bits and pieces of information that become available in numerous scattered Soviet sources, to give us some estimates of the overall structure and growth of the economy.

In this paper I can at best compare some of the readily available data from Soviet sources with some of the results of such detailed research of others and suggest some crude comparisons with the growth of the national product in the United States.

GROWTH IN SELECTED NATIONAL INCOME DATA, U.S.S.R., 1949–58

A recent working paper, published as a Rand research memorandum, by O. Hoeffding and N. Nimitz,[1] gives estimates of the national income and product of the U.S.S.R. for the years 1949–55 in current rubles and established prices.

In table 1, below, four selected items of these national income estimates are tabulated, and from these data are calculated and tabulated the percentage increase from year to year in these items.

TABLE 1.—*Selected national income data, U.S.S.R., 1949–55* [1]

Year	Total income of households, currently earned (billions of rubles)	Percent increase over preceding year	Consolidated total charges against current product of government, social, and economic organizations (billions of rubles)	Percent increase over preceding year	Net national product (billions of rubles)	Percent increase over preceding year	Gross national product (billions of rubles)	Percent increase over preceding year
1949	516.2		407.3		894.4		923.5	
1950	549.6	6.5	383.3	−5.9	902.3	.9	932.9	1.0
1951	572.1	4.1	419.8	9.5	958.6	6.2	991.9	6.3
1952	599.7	4.8	436.5	4.0	998.5	4.2	1,036.2	4.5
1953	619.8	3.4	441.9	1.2	1,018.9	2.0	1,061.7	2.5
1954	681.6	10.0	438.1	−.9	1,072.7	5.3	1,119.7	5.5
1955	712.3	4.5	489.9	11.8	1,150.3	7.2	1,202.2	7.4
Percent increase, 1949–55		38.0		20.3		28.6		30.2

[1] From "Soviet National Income and Product, 1949–55," O. Hoeffding and N. Nimitz, Project Rand research memorandum, RM-2101, Apr. 6, 1959, tables 1, 2, and 3.

[1] "Soviet National Income and Product, 1949–1955," by O. Hoeffding and N. Nimitz, RM–2101, a Project Rand research memorandum, Rand Corp., Santa Monica, Calif., Apr. 6, 1959.

Since these estimates are in current rubles, the effects of substantial price reductions in the Soviet economy, particularly in the years 1950–54 in retail prices and in 1949 and 1951 in industrial, are not shown in these figures, nor are there yet available appropriate price indices to make the adjustments.

Table 2 presents two statements, from Soviet sources, of the growth of national income over the period 1950–58 (in col. 2) and from 1951–55.

The overall increase in net national product and of gross national product from 1949 to 1955 in table 1 amounts to only 28.6 percent and 30.2 percent, respectively. On the other hand, the Soviet claims presented in table 2, column 2, mount up to a claimed increase in national income of 99 percent over this same period.

While a substantial (but unknown) part of the difference in the growth rates shown in table 1 and table 2 during the first 5 years of this period might be accounted for by the impact of the price reductions, the differences in growth rates in 1954 and 1955 could not be substantially affected by the price changes in the Soviet economy in these years, for by all indications they were of relatively modest proportions.

TABLE 2.—*Percent increases in national income of the U.S.S.R., reported by Soviet sources, over preceding year*

Year	Percent [1] increase in national income (in comparable prices) [2]	Percent [3] increase in national income
1950	21	
1951	12	12.3
1952	11	10.9
1953	8	9.4
1954	11	12.1
1955	10	11.9
1956	12	
1957	6	
1958	9	

[1] Sources: "Annual Reports of Plan Fulfillment," Central Statistical Administration of the U.S.S.R. Council of Ministers, Pravda and Izvestia, translated in the Current Digest of the Soviet Press, New York.
[2] The phrase "in comparable prices" was used in reporting only the increases in 1950, 1951, and 1956 in the Soviet reports.

Source: Calculated from data from "Narodnoe Khozaistvo S.S.S.R. v 1956 Godu," Moskva, 1957, p. 42.

Table 3 gives the Soviet estimates of increases, year by year, in the real income per working person, from 1950 to 1958. If one, by crude interpolation in the years where the overall averages per worker are not given, computes the growth of these claimed increases in real income per worker from 1951 to 1958 (70 percent) and compares this with the growth in total national income from 1951 to 1958 as given in table 2 (90 percent), the results are roughly consistent with the growth of the number of workers over the period.

TABLE 3.—*Percent changes in real incomes in U.S.S.R., 1949–58* [1]

	Reported increases in real income, in percent over preceding year, of—		
	Population, per worker	Workers and employees, per capita	Peasants, per capita
1950	19		
1951	10		
1952		7	8
1953	13		
1954	11		
1955		3	7
1956		3	12
1957		7	5
1958	5		

[1] Sources: "Reports on Fulfillment of State Plan," by the Central Statistical Administration of the U.S.S.R. Council of Ministers, Pravda and Izvestia; translated by the Current Digest of the Soviet Press, New York.

In table 4 are tabulated the total U.S.S.R. state budget revenues and expenses, as reported each year by the Minister of Finance, from 1949 to 1959. The increase by 1958 in total revenues amounted to 47 percent of the 1949 figure and in expenditures to 52 percent. The claimed increases in national income from 1949 to 1958 in table 2, however, amount to 157 percent.

TABLE 4.—*U.S.S.R. state budget revenues and expenditures, 1949–59* [1]

	Revenues		Expenditures	
	Total (billions of rubles)	Percent increase over preceding year	Total (billions of rubles)	Percent increase over preceding year
1949	437.0		412.3	
1950	422.1	−3.4	412.7	0.0
1951	468.0	10.9	441.3	6.9
1952	497.7	6.3	460.2	4.3
1953	539.7	8.4	514.8	11.9
1954	557.5	3.3	552.8	7.4
1955	561.6	.7	537.8	−2.7
1956	583.0	3.8	561.0	4.3
1957	614.5	5.4	598.2	6.6
1958	641.8	4.4	626.7	4.8
1959	722.7	12.6	707.2	12.8

[1] Source: "Reports on the Annual State Budget," U.S.S.R. Minister of Finance, Pravda and Izvestia, translated by the Current Digest of the Soviet Press, New York.

One may conclude, on the basis of these crude and imperfectly comparable indexes of growth in Soviet income and product, that the rates of growth claimed by the Soviets over the recent years are substantially exaggerated, but until further research gives us better estimates of the internal price level changes in the U.S.S.R., or direct estimates of the growth in real national income and product, the extent of the exaggeration will remain an open question.

Even a major scaling down of these Soviet claims, however, would still leave substantial growth rates for the Soviet income and product, certainly not to be unfavorably compared (from the Soviet point of view) to the total growth rates of the United States gross national

product (in 1954 dollars) from 1949 to 1955 of 34 percent, or from 1951 to 1958 of 17 percent; or to the total growth rates in the United States personal income per capita (in constant dollars) from 1949 to 1955 of 20 percent, or from 1951 to 1958 of 12 percent.

SOVIET PREDICTIONS OF FUTURE GROWTH, 1958–65

The Khrushchev theses on the 7-year plan, 1959–65 [2] predicts:

> The national income will increase by 62–65 percent in 1965 as compared to 1958. with its growth a further increase in public consumption will be effected. It will increase by 60–63 percent in the next 7 years. * * * The real incomes of factory and office workers in the next 7 years, per working person, will increase on the average by 40 percent as a result of the increase in wages, pensions, and grants as well as further price reductions in public catering. The real incomes of collective farmers, too, on the basis of the growth of agricultural production and higher laborer productivity, will increase for the same period by not less than 40 percent, mostly due to the expansion of the common output of the collective farmers.

In comparison with the claimed growth in national income and in real income per worker for the past 7 years (1951–58) these forecasts seem relatively modest, and even a substantial scaling down of the claims on recent performance would not make these forecasts of Soviet growth clearly out of character with the recent growth of the Soviet economy.

In considering the factors that will basically determine the feasibility of such growth in the Soviet economy in the coming 7 years, one must weigh heavily the continued growth in the recent past of capital investments by the Soviets in their national economy, summarized in table 5.

TABLE 5.[1]—*Planned capital investments in the national economy*

[Billions of rubles]

	Total	Of which—	
		From the budget	From enterprise resources
1953	156.1	106.7	49.4
1954	184.0	121.1	62.9
1955	167.2	109.3	57.9
1956	160.8	118.4	42.4
1957	178.6	124.9	53.7
1958	203.8	142.7	61.1
1959	231.2	162.1	69.1

[1] Source: "Reports on the Annual State Budget," U.S.S.R. Minister of Finance, Pravda and Izvestia, translated by the Current Digest of the Soviet Press, New York.

Using the Hoeffding–Nimitz estimate of Soviet gross national product of 1,202 billion rubles for 1955 and scaling down somewhat the Soviet claims of growth from 1955 to 1958, the percent of GNP going to investment in the national economy in 1958 is on the order of 15 percent.

[2] "Control Figures for the Economic Development of the U.S.S.R., 1959–65," Foreign Languages Publishing House, Moscow, 1958, p. 98.

The planned investments for the period 1959–65 is summarized by this quotation from the "Control Figures for the Economic Development of the U.S.S.R., 1959–65" (pp. 66–67) :

> The forthcoming 7 years will be a period of unprecedented construction in all parts of the country, and particularly the eastern regions. Capital investments by the state will be 80 percent greater through 1959–65 than in the preceding 7 years and will nearly equal the total investments made in the national economy through all the years of Soviet power.

The 7-year plan calls for total capital investments in the national economy in 1959–65 of 1,940 to 1,970 billion rubles, an increase of 81 to 84 percent over the investment total for 1952–58 of 1,072 billion rubles.[3]

The growth of the industrial working force by transfer of workers from the oversupplied agricultural sector, the education and training of professional and skilled personnel on a major scale, and the apparent success of the recent economic reorganization in improving the organization of the industrial sector of the economy are other plus factors, from the Soviet point of view, that suggest that these growth rates are not outside the possibilities of achievement. On the minus side, however, the continued urban housing shortage may put a brake on the transfer of rural workers to industry, the apparent shortages of high quality basic raw materials in some lines, and the ever-present shortage of good agricultural land in good and stable climatic areas may create real handicaps to the planned development. But even a scaling down of these forecasts of Soviet growth will leave possible growth rates that may make it possible for the Soviet income and product to approach the levels of those of the United States in the not too distant future if our growth rates of the recent past are not substantially increased.

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[3] Ibid., p. 67.

FOREIGN ECONOMIC ACTIVITIES

AN INTERPRETATION OF EAST-WEST TRADE

(By Robert Loring Allen, University of Oregon)

The term "East-West trade" is customarily the euphemism for the trade of the Soviet Union, Eastern Europe, and mainland China with the non-Communist countries of Western Europe and the Western Hemisphere. This paper deals with this trade and also in part with internal Sino-Soviet bloc trade as well as trade with other non-Communist countries. When the "bloc" is used, all of the Communist countries except Yugoslavia is meant. The statistical appendix includes the relevant trade data and a source bibliography contains references to the literature.

About one-third of the paper is concerned with (1) the value and volume of exports and imports of the bloc, (2) growth and trends in trade, (3) the geographic direction of trade, and (4) its commodity composition. In order for these facts and figures to have meaning, it is also necessary to treat (5) prices and the terms of trade, (6) the bloc's motives for trade, (7) the commercial policies employed by the bloc, and (8) trade experience. Following an evaluation and an examination of the prospects for trade is a brief indication of the problems posed for U.S. policy.

It must be kept in mind that most of the data are based upon the bloc country's national statistics and hence may be subject to error or distortion. The statistics are, however, probably sufficiently accurate that useful general conclusions may be drawn. The systematic use of dollar quotations does not reflect the use of dollars in trade, which is carried on in many currencies and even without foreign exchange through bilateral agreements. The dollar figures, however, are roughly comparable to other dollar magnitudes since the bloc trades at world market prices, regardless of domestic prices or costs.

VALUE AND VOLUME

The Sino-Soviet bloc is not a large world trader. The countries of the free world export less than 3 percent of their total exports to the bloc and acquire less than 3 percent of their imports from the bloc. In 1957, for example, the free world exported $99.8 billion, of which $2.9 billion went to the bloc. The bloc in the same year exported a total of $11.5 billion, of which only $2.8 billion went to the free world, the remaining amount being intrabloc trade. Thus, total exports by bloc countries, including exports to other bloc countries, was about 10 percent of total world exports.

The largest component of bloc foreign trade is Soviet trade. In 1957 total exports were $4.4 billion and total imports were $3.9 billion. This places the Soviet Union in eighth place as an importer, behind the United States, Canada, France, West Germany, the Netherlands,

the United Kingdom, and Japan. As an exporter, the Soviet Union is in sixth place, ahead of Japan and the Netherlands but behind the others mentioned. In 1958 the value of Soviet trade remained about the same as in 1957, but the volume increased slightly because of the continued decline in raw materials prices which still constitute the bulk of Soviet imports and exports.

Eastern Europe as a whole—Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania—is a larger trader than the Soviet Union. The big three—Czechoslovakia, East Germany, and Poland—imported $4.3 billion in 1957 and exported $4.2 billion. The other East European countries account for both imports and exports slightly in excess of $1 billion. Mainland Chinese trade is about $2 billion each way. Thus, including intrabloc trade, the entire Sino-Soviet area imports slightly less than $12 billion and imports about the same amount. U.S. imports and exports during the same period were substantially higher. The second largest world trader—the United Kingdom—imported and exported slightly less than did the bloc as a whole.

As in the case of the aggregate figures, the physical quantities of various products imported and exported are also small relative to the total amounts of the products produced and exchanged. In 1956 and 1957, for example, the Soviet Union imported 140,700 and 145,500 tons of crude natural rubber. World natural rubber production in 1957 was 1,935,700 tons. Malaya alone produced more than four times the Soviet imports. The free world produced more than 5.5 million tons of cotton in 1957 and more than 2 million tons of wool. In the same year the Soviet Union imported 108,800 tons of cotton and exported 318,400 tons. The Soviet Union imported 57,300 tons and exported 13,800 tons of wool. In 1957 the Soviet Union exported 85,400 tons of aluminum, representing for the United Kingdom about 10 percent of the 1957 rate of imports and less than about 3 percent of free world production in 1957. In 1956–57 the free world produced about 120 million tons of wheat. In 1957 the Soviet Union exported 5.5 million tons, a figure four times higher than 1956 shipments when free world production was slightly higher. The Soviet Union exported 18,300 tons of tin in 1957, mainly of Chinese origin, but free world tin consumption that year was 146,000 tons and production was substantially higher.

It would be possible to go down the commodity list product by product, not only for Soviet trade, but also for East European and mainland Chinese trade, and indicate the small and fractional percentages of imports and exports provided by these countries. For particular countries and particular products, however, the bloc may represent a significant proportion of trade. Finland and Iceland, for example, import nearly all of their petroleum products from the Soviet Union and Rumania. Egypt sells a large proportion of its cotton to the bloc. The large trading partners of the bloc in Western Europe seldom singly buy or sell a significant part of the output of a product category in trade with the bloc.

GROWTH AND TRENDS

Between the two World Wars Soviet foreign trade reflected its policy of autarchy—the drive for internal economic self-sufficiency.

Soviet trade was only enough to insure the fulfillment of its economic plans. The country imported in order to industrialize and exported in order to continue importing. Both imports and exports were below the 1913 czarist levels during the interwar period.

During the first 5-year plan, from 1928 to 1932, the Soviet Union bought significant quantities of machinery and equipment from the industrial countries, such as Germany and the United States. The Soviet Union, selling wheat at sacrifice prices, largely at the expense of literally starving Ukrainians, bought for technical excellence in machinery and in order to acquire technological know-how.

Trade was predominantly carried on in multilateral channels. Before 1929 nearly all Soviet trade was multilateral. During the great depression, the Soviet Union adopted some bilateral agreements, but during the 1930's much of Soviet trade remained multilateral. In 1938 less than 10 percent of Soviet trade was conducted under five bilateral agreements. In 1957 and 1958, the bloc countries were parties to 240 agreements, with the Soviet Union having the most agreements.

The large Soviet deficits which were incurred between 1925 and 1932 were covered by drawing down reserves, with short-term credit, and through the sale of gold. After 1932 Soviet trade declined significantly and the deficit turned to an export surplus. By 1938 Soviet foreign trade, cut by one-half as compared to 1930, was approximately balanced at $268 million imports and $251 million exports.

During the Second World War the most significant element was the large-scale unrequited deliveries of lend-lease aid by the United States. Toward and at the end of hostilities the Soviet Union acquired large quantities of foreign resources by confiscation from enemy countries. After the war reparations were also significant in Soviet imports. By 1946 trade had more than recovered, with exports at $642 million and imports of $761 million.

Beginning in 1948 bloc trade with the free world dropped off sharply, while both intrabloc and free world trade was continuing to expand. In 1948 Soviet-East European trade with the free world had been balanced at about $2 billion each way. The low was $1.4 billion for imports and $1.6 billion for exports in 1953. Since 1953, bloc trade has been rising rapidly.

In 1955 Soviet imports were $3.1 billion and exports were $3.5 billion. Imports went up 18 percent in 1956 and another 11 percent in 1957, while exports increased 4.1 percent in 1956 and 21.3 percent in 1957. The full 1958 trade data have not been released, but indications are that the value remained about the same as in 1957 while volumes increased.

In Eastern Europe the largest trader is East Germany, followed by Czechoslovakia, Poland, Hungary, Rumania, and Bulgaria. East German imports more than doubled between 1952 and 1957. The largest expansion, however, took place in 1957, when imports jumped from $1.3 billion to $1.6 billion. Exports also experienced a large increase in 1957, from $1.4 billion in 1956 to $1.8 billion in 1957. Czechoslovakian trade in 1957 was approximately balanced at $1.4 billion each way, although in 1955 and 1956 that country ran an export surplus. Trade in 1957 was not quite double the 1948 level, which was nearly triple the 1938 level. Polish trade in 1957 ran a serious trade deficit—$1.3 billion in imports and $1 billion in exports. An import surplus

has characterized Polish trade for the last 4 years, during which time imports have increased by 38.4 percent and exports by only 13 percent. The trade of Rumania, Hungary, and Bulgaria has also been expanding in recent years. East European exports were $4.6 million in 1955; in 1957 they were $5.5 billion, a 19.6 percent increase. Imports of Eastern Europe increased from $4.3 billion to $5.7 billion between 1955 and 1957, an increase of 32.6 percent.

Mainland Chinese trade has also expanded considerably in recent years. Trade statistics for that country are particularly poor, but Soviet data shows an increase in both imports and exports except Soviet exports in 1957 which fell sharply. The Soviet Union is China's leading trading partner, accounting for about one-fifth of Chinese trade. Other bloc countries, as well as free world countries, show increases in trade with mainland China.

GEOGRAPHIC DIRECTION OF TRADE

Mainland China has been the leading trading partner on the Soviet import side in recent years, except in 1957 when China slipped slightly behind East Germany which has been in the second position. Czechoslovakia is third and Poland is fourth. Mainland China accounted for 18.7 percent of Soviet imports in 1957, while all of Eastern Europe provided 48.6 percent. China has been the leading buyer also, again except in 1957 when both East Germany (normally in second place) and Czechoslovakia (normally in fourth place) bought more Soviet goods. Poland has been in third place in recent years. China bought 12.4 percent of Soviet exports in 1957 (in 1956 it was 20.3 percent). Eastern Europe absorbed 57.6 percent. Thus, other bloc countries (including the Asiatic Communist countries) constituted 70.2 percent of the imports and 73 percent of the exports of the Soviet Union in 1957. There have been relatively small variations in these percentages in recent years, but since the consolidation of Communist power and Soviet influence over the bloc, the overwhelming bulk of Soviet trade has been with other bloc countries.

Among free world countries, only Finland, the United Kingdom, and Egypt, in that order, provided $100 million or more in goods to the Soviet Union. Finland and the United Kingdom only bought $100 million or more from the Soviet Union. Finland in recent years has been the free world country from which the Soviet Union imports most, while the United Kingdom has been the principal purchaser. Because of Soviet punitive action against Finland in 1958 and 1959 Soviet trade with that country probably declined for those years. Other significant trading partners in the free world (more than $50 million in imports and exports in 1957) are Austria (exports only), West Germany, Yugoslavia, France (import side and slightly less on export side), and India (import side, less on export side).

Western Europe (Austria, Belgium, Denmark, Finland, France, West Germany, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and Yugoslavia) accounted for 13.8 percent ($423 million) of Soviet imports in 1955 and 16.9 percent $667 million) in 1957, a growth of 59.8 percent in the period. These same countries bought 15.3 percent ($532 million) in Soviet exports in 1955 and 16.8 percent ($735 million) in 1957, an increase of 38.2 percent. On the

other hand, the underdeveloped countries with whom the Soviet Union trades (Afghanistan, Argentina, Burma, Cuba, Egypt, Ghana, India, Iran, Malaya, Turkey, and Uruguay) provided 5.9 percent ($179 million) of Soviet imports in 1955 and 9.2 percent ($361 million) in 1957, an increase of 101 percent. These countries bought 2.5 percent ($86 million) of Soviet exports in 1955 and 5.4 percent ($238 million) in 1957, an increase of 176 percent.

Thus, while Soviet trade with underdeveloped countries has been increasing rapidly in the last few years, Western Europe has been holding its own. What in effect has been happening in recent years is that underdeveloped countries have been gaining at the expense of smaller rates of growth in trade with bloc countries. In the expansion of trade with Western Europe, Austria, Belgium, West Germany, the United Kingdom, and Yugoslavia have been the leaders. The rapidly growing trade with underdeveloped countries has primarily been with Afghanistan, Egypt, India, Malaya (on the export side only), and Uruguay.

The Soviet Union is East Germany's leading trading partner, accounting for 45.6 percent of the latter's imports and 44.7 percent of its exports in 1957. On the import side, West Germany is next (11.4 percent), followed by Czechoslovakia, Poland, and China (together 19.2 percent). West Germany is the second leading exporter to East Germany (11.3 percent), followed by Poland, Czechoslovakia, and China (together 21.9 percent). Larger than proportionate increases have been registered by such underdeveloped countries as Brazil, Egypt, and India. These three countries together expanded their exports to East Germany five times between 1955 and 1957, and East Germany has tripled its exports to them.

The Soviet Union is also Czechoslovakia's leading trading partner, accounting for 37.2 percent of the latter's imports and 27.1 percent of exports. On the Czechoslovakian import side, East Germany, China, and Poland (Hungary the same as Poland) in that order of importance, provide 19.8 percent of imports. In most recent years exports to Czechoslovakia, Polish exports have been greater than China's exports. East Germany, Poland, and China are the leading purchasers of Czechoslovakia goods, accounting for 22.6 percent of its exports. The Soviet Union claimed 26.5 percent of Polish exports (a declining percentage in recent years) and provided 33.4 percent of Polish imports. On the import side, East Germany is second and Czechoslovakia is third (together 19.4 percent). On the export side, Czechoslovakia is second, with 12.9 percent. Unlike other bloc countries except East Germany, a free world country—the United Kingdom—is an important buyer of Polish goods and is the third largest importer, with 6.5 percent of Polish exports. Imports from the United States jumped from 0.2 percent in 1956 to 4.5 percent (fourth largest exporter to Poland) in 1957. Large imports from the United States continued in 1958 and 1959. In general, East European trade with the Soviet Union has been growing less rapidly than has its trade with mainland China and with the underdeveloped countries. East European trade with Western Europe has made only minor gains.

COMMODITY COMPOSITION

The commodity composition of Sino-Soviet bloc trade strongly emphasizes the export of raw materials and food products and the import of machinery and equipment. This circumstance is even more pronounced in bloc trade with the free world, since much of the machinery exports of the Soviet Union, East Germany, and Czechoslovakia, the leading machinery producing countries, go to other bloc countries.

More than one-half, and in many years substantially more than one-half of Soviet exports and imports are in the raw materials and fuels category. If grain is added on the export side, then about 70 percent of Soviet exports consist of food and various kinds of raw materials. Machinery and equipment exports have increased substantially since the end of the Soviet postwar recovery. Before the Second World War, only 5 percent of total exports were machinery. In the post-recovery period it has characteristically been between 15 and 25 percent. These greater capital goods exports reflect, at least in part, the great expansion of the Soviet industrial base. On the import side, the need for machinery and equipment, as reflected in purchases, has not abated, hovering between one-fourth and one-third of Soviet imports. One of the most striking characteristics about Soviet trade, indeed about bloc trade in general, is the small proportion of consumer goods. In recent years, the Soviet Union has imported less than 10 percent of its total imports in the form of consumer goods, and its exports of these items has been about 20 percent. This phenomenon, like the growing exports of machinery, reflects the basic policy decision emphasizing industrial growth to the neglect of consumer satisfaction.

East Germany and Czechoslovakia are the industrial giants of Eastern Europe. The former's exports of machinery comprise 60 percent of total exports, with most of the remainder fuels and raw materials. Czechoslovakia exports 40 percent of its goods in the form of machinery, proportionately more raw materials, consumer goods, and food than East Germany. Hungary is beginning to export larger quantities of machinery, but nearly one-third of its exports remain foods. Poland, interestingly enough, is a leading consumer goods exporter, proportionately more than four times more than other East European countries. Rumania's exports heavily emphasize oil and Bulgaria, proportionately, is the leading food exporter.

East Germany and Czechoslovakia must import great quantities of food and raw materials, accounting in both countries, for about 80 percent of total imports. Bulgaria, Poland, and Rumania import proportionately more machinery than does the rest of Eastern Europe, and the last has a very high raw materials import bill. Again Poland is in a unique position, importing nearly one-half of its imports as consumer goods, nearly triple the proportion of other East European countries. About 82 percent of Poland's imports are machinery and consumer goods.

The structure of Sino-Soviet bloc trade does not indicate any existing or potentially decisive degree of complementarity which would tend to propel the bloc into a position of leading world traders. Stretching from Berlin to Peiping, the Sino-Soviet bloc contains vast resources which makes it possible for the area to be almost a self-

contained unit, if it so desires. Since central planning and the Communist dogma both require a closed system, trade has seldom been viewed simply as a matter of comparative advantage; rather trade was and is an economic necessity. As the area develops the necessity will probably decline and the bloc must decide whether or not to trade to achieve sometimes marginal cost reductions. It is likely, given the Communist system, that this will be primarily a political, not an economic decision.

It is not possible to make a strong case for important complementarity between the bloc and many areas of the world, including Asia, Africa, the Middle East, and Latin America. The strongest trade ties of the bloc are with Western Europe, based upon bloc needs for machinery and equipment. Food products and consumer goods technically could find a large market in the bloc, but only if consumer sovereignty asserted itself in the area. This is a rather unlikely event.

There is, of course, some basis for trade and trade will not only continue but expand. There is no reason, however, to believe that the bloc trade, as a proportion of world trade, will increase significantly or that either the free world generally or the bloc will develop inextricable dependence upon one another. This does not apply, however, for individual countries, which can develop a crucial reliance upon the bloc for a single or a few commodities or depend upon the bloc for a substantial part of its export market.

PRICES AND THE TERMS OF TRADE

The Soviet Union has an independent internal pricing system in which the prices of products do not reflect either their domestic costs (except in a bookkeeping sense) or world market prices. Indeed, it is only by accident if the internal price of Soviet products, translated at the official exchange rate into other currencies, even comes close to the prices of comparable products in other countries. Soviet specialists have argued that domestic prices and costs are not too far out of line and that periodic price reforms perform the function of bringing costs and prices together. Even so, world prices are the guidelines for Soviet-bloc trade, a matter of necessity which has been elevated to principle and embodied in trade agreements. When Eastern Europe came under Soviet influence and when mainland China became controlled by the Communists, these countries followed the Soviet model. But even among the bloc countries, there is no systematic relationship among prices and bloc trade is on the basis of world prices.

Thus, when a bloc country buys a combine and pays $6,000 it pays that amount in foreign exchange or with a credit balance of say 24,000 rubles (the official exchange rate) in favor of the trading partner. The domestic price might be 35,000 rubles or 20,000 rubles. Likewise, when the bloc sells a tractor, the price is determined by comparable machines on the export market produced by the United States, West Germany, and the United Kingdom. The Soviet Union gets say $2,500. The domestic costs may be above or below that amount. Since the ruble is substantially overvalued, as even a cursory examination of Soviet price lists indicates, trade tends to take place at a net bookkeeping deficit to the state trading organizations, presumably

paid out of the budget. In a comparative cost sense, however, there is a net economic gain in most cases because Soviet real costs differ from Soviet, as well as world market prices.

While it is the stated policy to trade at world market prices, there are many divergences in practice and in a few cases a conscious departure from the policy. Technically, nine situations could prevail. Soviet exports could be (1) overpriced, (2) market-priced, or (3) underpriced, each in combination with (*a*) overpriced, (*b*) market-priced, or (*c*) underpriced trading partner exports to the Soviet Union. The Soviet Union is best off in the case of (1) (*c*); the trading partner is best off in the case of (3) (*a*); while (2) (*b*) is the stated Soviet policy. In a few cases the Soviet Union deliberately sells at a discount (3) in order to penetrate a market; in other cases the Soviet Union pays a premium (*a*), either in order to acquire some badly needed commodity or to provide the basis for Soviet exports. In many cases these situations are accompanied by bargaining which reduces the trading partner's price (3) (*c*) or by overpricing Soviet exports (1) (*a*). In this event the terms of trade are indeterminate; the relative bargaining strength of the trading partners is all-important. The West European trading partners are strong and pricing tends to be close to (2) (*b*). The Soviet Union is trying to make a favorable impression on its new trading partners in Asia, Africa, and Latin America, so that (3) and (*a*) are frequently offered. In practice, however, the underpriced Soviet exports (3) are either illusory because of the conditions of trade or adverse commercial practices or are accompanied by bargaining which lowers the prices of the products of the trading partner (*c*). When premium prices (*a*) are offered, they are frequently accompanied by overpriced Soviet exports (1).

In practice, every conceivable pricing situation has arisen. The bloc paid premium prices on Egyptian cotton and then overpriced its exports. Indonesia was paid a premium for rubber but the accumulation of nonconvertible balances wiped out the advantage. Argentina, Uruguay, Iceland, and others buy Soviet petroleum at lower than market prices. The Soviet Union sold tin at the world market price (stabilized by the International Tin Council) but in the process used up all of the Council's funds and broke the price after the Soviet tin had been sold. The Soviet Union has sold aluminum at prices 4 to 12 percent lower than that offered by the leading trader, Canada, and has offered timber, pharmaceuticals, and many other products at below market prices.

The bloc has frequently been accused of dumping. This term has no meaning for state trading countries and usually has the meaning simply of unfair competition. A technical charge of dumping can be documented in the tin case, however, since the tin was a reexport from mainland China. The latter was paid a higher ruble price (8,278 rubles per ton) than were charged by the Soviet Union (8,226 rubles per ton).

It is frequently averred that the bloc has a decisive edge in price competition with the free world since the former's state trading organizations can ignore prices and can act quickly and flexibly, if they choose. This is true, but only in a limited sense. There are budgetary and planning constraints, as well as potential conflicts of

interest if such a practice is pursued on anything but a relatively small scale. Large-scale price cutting or substantial rapid changes frequently involve an exorbitant cost which even the Soviet Union is unwilling to absorb and may also interfere with plans in a costly way. Overriding political considerations may on occasion dictate substantial price manipulation or a sudden change, but these circumstances are rare.

Insofar as the bloc follows world prices, its terms of trade are fundamentally similar to the average of world terms of trade for the particular product mix of the bloc country. The Soviet Union, for example, is basically a raw material exporter and a capital goods importer. Thus, when primary product prices decline, as they have in recent years, the Soviet capacity to import, in real terms, falls. The trend toward lower raw material prices recently has thus hurt the Soviet Union to some extent, in addition, the secular trend toward the improvement in terms of trade of manufactured products observed by Kindleberger and others has also reduced the Soviet capacity to import. On the other hand, the recent rising machinery exports and greater raw material imports tend to offset, at least in part, the former tendency.

East Germany and Czechoslovakia, as industrial nations, have tended to enjoy the fruits of that position. However, their industrial exports are generally of a lower quality and meet stiff competition in foreign markets, thus lowering the advantage of improving terms of trade of manufacturing countries. The rest of Eastern Europe, mainland China, and the Asiatic Communist states are raw material exporters and industrial product importers. Thus, for the most part, their terms of trade heave deteriorated to some extent in recent years.

Since the bloc countries are state traders, they can and do practice discrimination. The Soviet Union, is of course, in the best position to discriminate. The only systematic discrimination which has been observed has been against Eastern Europe. According to a careful study of recently released Soviet data, Horst Menderhausen (Review of Economics and Statistics, May 1959) indicates that the Soviet Union charges Eastern Europe more for Soviet exports and pays less for its imports from Eastern Europe than for the same products bought from and sold to Western Europe. Limited evidence also suggests that the Soviet Union, by accident or otherwise, has occasionally taken advantage of its superior bargaining power with primary producers. The bargaining strength of the Soviet Union, however, as well as of Eastern Europe and mainland China, is not sufficiently great to discriminate to achieve price advantages to any significant degree against any of its major trading partners in Western Europe.

One element in bloc terms of trade is of some technical but probably at present little practical significance. By remaining aloof from the world market while trading at world prices, and by insulating trade through bilateral agreements and completely nonconvertible currencies, the bloc is able to claim a slight edge in the terms of trade. The absence of an effective demand on the world market from the bloc on a year-to-year basis implies that the world price tends to be lower for those products which the bloc does buy than it would have if the bloc were regularly in the market. By paying the world price,

the bloc has a lower import price. On the other side, the absence of regular bloc supplies implies that the world price is higher than it would have been if the bloc had been in the world market. Thus, when selling at the world price, the bloc is paid more than it would have if it had been facing competition with other sellers. This automatic edge is possible only because of the sheltered condition of bloc trade. Three-fourths of this trade is within the bloc—presumably at world prices—and the bloc is not noted as a reliable and systematic buyer and seller in free world markets. To the extent that bloc supplies and requirements are known, they can be accounted for in the world price and the improvement in the terms of trade for the bloc can be eliminated.

It is unlikely that this effect is of any great significant in free world markets, since the bloc supply and demand is not substantial in most cases. It would tend to become more significant when and if the bloc assumes more importance in the free world market generally and for particular products. It is also of greater magnitude in the exchange of bloc capital goods, which tends to have a relatively elastic supply, for primary products, which tends to have a relatively inelastic demand.

COMMERCIAL POLICY

The essential ingredient of Soviet, East European, and mainland Chinese commercial policy is one-to-one bilateralism, conducted through formal trade payments agreements to which governments are the customary signatories. All of the intrabloc trade is carried on through these agreements and much of the bloc's free world trade is so conducted.

It is easy, however, to overestimate the significance of bilateral agreements in the overall trade of the bloc with the free world. As Western currencies have become stronger, the major trading partners of the bloc have increasingly refused to trade under strict payments agreements which avoid the use of foreign exchange. The United Kingdom and West Germany, for example, have agreements but their provisions are such that no agreement is really necessary. Finland, of course, is in a weak trading position and still must trade under agreements. Even there, however, triangular agreements with East European countries in one corner have been tried. The bloc has been most successful with its agreements policy in the underdeveloped countries. Even these countries, however, have begun to revolt. India trades in sterling or convertible rupees. Indonesia abandoned strict bilateral trading. Uurguay's agreement is in effect a convertible currency agreement. Many other countries have been more insistently urging straight cash trade.

The bloc, however, thinks it sees an advantage in bilateral agreements and continues to push them wherever possible, and accepts them completely for intrabloc trade. The intrabloc agreements are coordinated with the plans of the countries involved, all of which are coordinated with Soviet plans. These agreements are quite elaborate. Bloc agreements with nonbloc countries have been increasingly liberalized. Quotas have been abandoned in most of them and as mentioned earlier, there are more provisions for convertible currency payment, rather than through clearing accounts.

Bilateral agreements are generally of two kinds: one, a trade agreement that determines the characteristics, amounts, and conditions of trade, and the other, a payments agreement which specifies the method by which each partner is paid for exports and is to pay for imports. Frequently, the two agreements are in the same document. In a few cases there are only trade agreements.

The trade agreements are usually for a period of 1 to 5 years, providing for annual tacit renewal without specific negotiations, but also permitting unilateral renunciation upon 90 days' notice. The trade agreements now frequently provide only a relatively simple listing of products or product categories to be exchanged. The individual transactions under trade agreements are carried out by ordinary commercial contracts after negotiations on prices and quantities have occurred. Most of the agreements specify an equal value of trade for both countries at a given level. In a few cases, trade is deliberately unbalanced in order to allow for paying off an indebtedness or to permit deliveries on credit. Reexportation is customarily prohibited in agreements with primary producers, but in agreements with some European countries, it is permissible.

The payments agreements specify the financial arrangements by which trade is conducted. They usually have the same duration and renewal provisions as the trade agreements. The principal provisions define whether or not a convertible currency is to be employed, and if not, provide for the establishment of clearing accounts in the appropriate financial institutions of the trading partners. The agreement also specifies the currency unit of account and credit provisions. The agreement also provides for methods of clearing balances in the clearing account, either at specified periods or at the end of the agreement, and for the correction and/or liquidation of seriously unbalanced accounts.

In typical agreement, an account is maintained in the central bank or official clearing office of both trading partners. The accounts are credited in favor of the exporting country by the value of export shipments and debited by the value of imports or other transactions giving rise to payments to the partner country. Official exchange rates are employed. The actual financing of particular commercial transactions involves the use of bank letters of credit, drafts drawn directly on the importer, and other traditional foreign exchange instruments. Banks in free world countries holding drafts on Soviet bloc country importers or their banks sell them to their own central bank, and after verification, these claims are settled by entries in the clearing account. Likewise, commercial banks having to make payments to firms or banks in bloc countries, either on their own account or for the account of customers, make the payments to their own central bank or clearing office in their own currency and the central bank in turn makes the appropriate entry in the clearing account.

Since it is seldom possible to maintain an exact balance at all times, "swing" credit provisions are made. In most of the agreements a specified sum of money is denoted as swing credit. The sum is usually a percentage of total trade, ranging from 5 to 20 percent, with about 10 percent being customary. A wide variety of settlement provisions are contained in the agreements. The four basic methods are: (1) transfer of gold or convertible currency, (2) shipment of goods, (3)

triangular arrangements, and (4) reexports. The most common are the first two. Many of the agreements which make regular use of the clearing account specify payment in convertible currencies or gold either at the end of the agreement should there remain a balance, either immediately at the expiration of the agreement or after a specific waiting period, or at regular intervals during the life of the agreement, and/or when the swing credit is exceeded.

For the most part trade and payments agreements are negotiated between representatives of governments, thus committing governments to specified performance. For the bloc this is perfectly natural. It should not be concluded, however, that the agreements are enforceable legal documents, on either trading partner. The Soviet Union has on occasion ignored its agreements. Usually, if any legal action is brought, the Moscow Arbitration Court holds exclusive jurisdiction. In the free world, governments ordinarily make a commitment to make licenses available to private traders but do not guarantee the level of trade. They do, however, perform the vital function of bringing bloc state traders into contact with indigenous private traders and use the Government's good offices to acquaint buyers with bloc goods and export capabilities.

Most of the other elements of commercial policy are either not applicable to state trading nations or these countries conform generally to accepted standards. Most-favored-nation clauses, for example, although used and provided for in bloc agreements, have no meaning when all trade is in the hands of the government. The Soviet Union and other bloc countries have a tariff, but it is nominal and is not used for discrimination, since the state trading organization is a more effective discriminator.

BLOC MOTIVES FOR TRADE

Soviet bloc motives behind international trade are a curious amalgam of economic and political considerations. This is in part due to the persistence of the traditional Communist orientation toward autarky. In principle, the Soviet Union continues to pursue this dream of economic self-sufficiency but has generalized it to embrace Eastern Europe to a certain extent. On the other hand, Soviet leadership is aware of trade serving as a lever for both economic and political influence and exhibits little hesitation in conducting trade for these purposes. Simultaneously, an apparently greater recognition exists for the cost-reducing opportunities that appear in international trade.

Temporary political considerations aside, Soviet bloc trade with most of the free world, which is centered in Western Europe, is conducted primarily for commercial purposes. The Soviet bloc motivation stems basically from the necessity of procuring machinery, equipment, and materials which are either not available from domestic sources or can be had only at prohibitive costs. Its exports, in turn, are of a nature which the bloc's trading agencies feel can be disposed of with a minimum of cost or inconvenience to the national economy and its plans. Trade in itself has been regarded as a temporary necessary evil.

Ultimately, political motivations have a place in all Soviet bloc trade. Since 1953 this has been most dramatically apparent in the

developing trade relations of the bloc with its new partners in Asia, Africa, and Latin America. Yet to emphasize this motivation alone would be to obfuscate rather than to illumine the complex nature of bloc motives. The very process of industrialization experienced by the Soviet Union and currently prevailing in Eastern Europe and mainland China has given rise to certain conditions related to economic factors as well.

The Soviet Union continues to need large quantities of machinery and equipment, as well as some kinds of raw materials, in its sustained emphasis on rapid industrialization. The addition of Eastern Europe and mainland China to the Soviet sphere of influence has accentuated this need and has added, at least for the present, other import requirements. It has been necessary for the Soviet Union to be the major source of important supplies for members of the bloc. Meantime, the capital goods needs of the Soviet Union itself have shifted as its economy has grown to the point where primarily the more highly technical and specialized machinery is required more than the basic simple types of capital goods. It is now simultaneously capable of exporting a limited line of standardized capital equipment. Some mineral and metals industries have begun to experience rapidly rising costs. Thus, the bloc needs trade with Western Europe (and the United States) for specialized capital goods and with primary producers for raw materials, possessing raw materials for the former and some capital goods for the latter in trade which is advantageous to the Soviet Union.

While a substantial amount of trade could and does exist on economic grounds alone, the specific conditions of trade, its volume with particular countries, and its conduct and characteristics reflect markedly political conditions. Trade is used in an attempt to create a favorable view of the Soviet Union, to reward friends and punish enemies, and to promote the ultimate aim of Communist world domination.

One of the principal aims has been to establish an impressive reputation for Soviet industry and to prove that the Soviet Union is a great power, worthy of respect and admiration. Related to this objective is the Soviet desire to demonstrate that the Soviet brand of socialism can work and indeed is the best system, because in just a few years the Soviet Union, initially weak and impotent, has risen to challenge the most advanced industrial nation. Furthermore, the Soviet Union seeks to weaken the economic and political position of the United States. The Soviet Union hopes to encourage an always-incipient neutralism, to have in public office those who are favorable to the Soviet Union, and to be able to impress those who control the means of communication. Other important political objectives include the diplomatic recognition of nations not having relations with bloc countries, the promotion of communism and local Communist parties in other countries, as well as political support for its policy positions, particularly where they conflict with those of the United States.

Soviet goals do not all work in the same direction. Frequently they conflict, giving rises to contradictory behavior. These conflicts arise in part from still unresolved internal policy disputes, from the dual position of the Soviet Union as a nation and as the chief pro-

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mulgator of communism in the world, from conflicting priorities in the use of resources—internal versus foreign and Communist versus free world—from inexperience, ineptitude, bureaucratic conflicts, and from competition and conflicts among its trading partners.

While it is clear that the Soviet Union hopes eventually to control the world and that economic relations are one of the means by which this expectation is to be achieved, for the most part the bulk of trade serves at this time the vital economic function of providing the Soviet and bloc economies with needed supplies at a cost advantage. Economic warfare for political purposes in a supplementary motivation, pursued when it can be done without significantly impairing the fundamental goal of building bloc strength.

TRADE EXPERIENCE

Living in an artificial, enforced amicability, it is not possible for the members of the bloc to complain in public about their trade experience with other members of the bloc. On several occasions it has become known that the countries of Eastern Europe and mainland China have been less than fully satisfied with their trade with the Soviet Union. The price disadvantage of Eastern Europe is more apparent to them than it is to the outside and has resulted in forceful presentations to the Soviet Union, culminating several years ago in a Soviet agreement that world prices would be the basis of intrabloc trade. As noted earlier, however, Eastern Europe remains the object to Soviet price discrimination. Mainland China as well as Eastern Europe, has felt that the Soviet Union was not providing enough economic assistance. It is probably that the bloc countries make all of the same complaints about trade with the Soviet Union that free world countries do, and then some, but it is discreetly kept within the family.

In trade with the free world it is necessary to differentiate, with respect to performance, among the bloc countries. In general, Eastern Europe, particularly East Germany, Czechoslovakia, and Poland, are better traders. Partly this results from their greater experience as world traders and partly it reflects that to Eastern Europe trade is more of an economic matter—a vital necessity in the domestic economy. To the extent that these countries sometimes do not measure up in trade, it results from the limitations of their economies, the rigidities of planning, mistakes, occasional lapses into efforts to use trade for political purposes, and the necessity to support Soviet policies, even in matters of trade. Mainland China also is, for the most part, a straightforward trader, but suffers from many of the same problems faced by Eastern Europe.

The Soviet Union is an inexperienced trader compared to Western and Eastern Europe, and even many of the primary producers. The result is a larger number of mistakes. The much-vaunted state trading organizations and planning system used in Soviet trade has revealed little flexibility in performance on most occasions. Clinging to the tattered shreds of bilateralism also does not improve Soviet trade relations. The use of trade for political purposes and the employment of the crude bargaining power which sometimes accompanies state trading also have resulted in some unsavory incidents.

It is also necessary to differentiate among the bloc's trading partners. The Western European countries are nearly all old trading nations, with centuries of experience and a considerable talent even in dealing with such obstreperous trading partners as the Soviet Union. Thus, their experience tends to be relatively satisfactory, because they know what to expect and how to handle the problems which arise. These countries have also rejected bilateralism and not trade principally in convertible currencies. The newer countries frequently not only lack trade experience in general, but also have traded with bloc countries only rarely and in small amounts. Finland and Yugoslavia are special cases. Both have been subjected to Soviet punitive action in trade matters. Finland has generally taken its punishment, at a considerable cost to its economy. Yugoslavia has been more difficult, refusing to bow to Soviet demands, even though, as in the Finnish case, at some cost to its economy.

The most important categories of failures of bloc countries, which of course do not apply either to all bloc countries or to all their trading partners, are: (1) Pricing, (2) failures to meet all trade targets, (3) large year-to-year variations in trade, (4) piling up debit balances, (5) delays and irregularities in exporting, (6) poor quality goods, (7) questionable competitive practices, and (8) unsatisfactory commercial practices. Prices have been commented upon earlier.

It is seldom that trade comes close to the targets specified in the agreements. A shortfall, sometimes of considerable significant, is most common. The Mikesell-Behrman study, "Financing Free World Trade With the Sino-Soviet Bloc," examines the statistical record. Actual imports by the bloc were between zero and 10 percent of target imports in 5 percent of the 240 agreements examined. Imports were between 10 and 25 percent of targets in 8 percent of the agreements and between 26 and 50 percent in 25 percent of the cases. Thus, the bloc imported less than one-half of what it said it would in 38 percent of the cases. Bloc exports have a similar record. The bloc exported one-half or less of agreement targets in 36 percent of the agreements. Eastern Europe performed better than the Soviet Union and West European trading partners fared better than the primary producing countries. The Soviet Union both imported and exported only 38 percent of the targets for the underdeveloped countries of Asia, Africa, and Latin America. Eastern Europe exported 65 percent and imported 72 percent of targets with these countries. On the other hand, Soviet imports from Western Europe were 88 percent of the targets and exports were 93 percent of targets. Eastern Europe's exports were 75 percent and imports 73 percent of targets in trade with West European countries.

The Soviet Union claims that planning and bilateralism lend stability and reliability to trade. The statistical record, however, shows that Soviet trade in general has wider year-to-year variations than the trade of West European countries with the same trading partners. Furthermore, under bilateral agreements in which no foreign exchange is involved, bloc countries have frequently run up substantial balances, thus in effect borrowing from their trading partners. These balances have been most common with underdeveloped countries, since the experience of Western Europe has enabled them to forestall the imbalances or insist upon the use of convertible currencies. In some

cases, as in Argentina, Indonesia, and some other countries, the balances have constituted a serious problem.

Except in the case of standardized bulk commodities, bloc countries do not have a good record of quality, durability, and performance characteristics in their exports. Even in the case of East German and Czechoslovakian equipment, much of it is below the quality of machinery and equipment exports of Western Europe. Some bloc products sell at a discount in most markets and in other cases repeat sales are difficult because the first lot did not hold up. The underdeveloped countries have frequently sought redress for inferior goods. Again, however, Western European traders have spared themselves a flood of substandard bloc goods by careful buying, insistence upon guarantees, and scrutinizing each transaction closely. Irregularities in deliveries, most notably delays in shipment and shipping goods with different specifications or of a different quality, also characterizes some of Soviet bloc trade. Rigidities in planning often cause these circumstances and also result in out-of-season shipments or deliveries under other adverse circumstances.

The Soviet Union is often a difficult competitor, unpredictable and unwilling to enter international agreements. Cutting prices has enabled the Soviet Union to break into markets—such as tin, aluminum, petroleum—in which its activities in the past have been minimal. The other supplying countries complain bitterly, but there is little that can be done. The primary producers—Bolivia, Malaya, and Canada, among others—have received the hardest treatment, but even in the machinery field, Western Europe is beginning to feel some bloc competition. Bloc countries also pursue some other unsavory commercial practices, such as reexporting commodities in violation of agreements, changing prices of exports, and so forth.

The above is not intended as a blanket indictment of experiences and performance in bloc foreign trade. The bulk of that trade is in fact more or less normal commercial intercourse, conducted under reasonably satisfactory conditions. The aberrations are tendencies which occur when trading partners are new, inexperienced, or not watchful in trade with the bloc.

EVALUATION AND PROSPECTS

Soviet bloc trade is not of any great significance either in its overall volume or with reference to particular commodities in total world commerce. Most of the trade of each bloc country is with other bloc countries, with the Soviet Union the leading trading partner in each case. Trade of the bloc with the free world is an important marginal element in the trade of many of the West European countries, is of considerable significance to Iceland, Finland, and Yugoslavia, and is of growing importance for a group of primary producing countries, such as Egypt and India. Soviet bloc trade in recent years has been growing more rapidly than world trade, but leveled off in 1958. Except for East German and Czechoslovakian trade, bloc trade is fundamentally an exchange of raw materials and food for machinery and equipment. A reverse trend is beginning for Soviet trade with underdeveloped countries.

The conditions of Soviet bloc trade leave much to be desired, deriving from inexperience, the use of the predatory policies of state

trading and bilateralism, and the effort to use trade for political purposes. The more experienced trading partners have managed to avoid the potential deleterious effects of trade with the bloc by carefully monitoring such trade. While state trading is a permanent fixture, bilateralism is weakening as increasing numbers of bloc trading partners insist upon trade in convertible currencies. Nearly all of Western Europe is in this position now and more primary producers are beginning to insist upon this type of payments. Bloc motives for trade have been and remain fundamentally economic in nature, although political factors have intruded increasingly in recent years.

Soviet bloc trade will continue to expand in the years to come. The 7-year plan schedules substantial increases. The plan also, however, calls for large additions to the output level of many items, such as cotton and wool, which are still imported. In the nonmachinery categories, the bloc will tend to become more autarchic in the next decade. More important, however, is that the investment plans call for such an expansion of capital facilities that not only will large-scale capital imports be required to fulfill the plan, but it is also unlikely that substantially enlarged machinery and equipment exports to underdeveloped countries will be possible. Eastern Europe will continue to need raw material and food imports on a large scale and will probably seek these products more outside the bloc than inside.

There exists the possibility that for some particular products, the Soviet bloc, especially the Soviet Union, could begin to assume major proportions in the world market in the near future. If petroleum production increases as scheduled and the internal utilization rate does not increase sharply, it is likely that Soviet and Rumanian oil will become important competitors of the Middle East and the United States within the next decade. Aluminum, possibly tin, and perhaps other products occupy similar positions.

It is frequently speculated that the Soviet Union now and will increasingly possess the capability and desire to use its influence in trade to disrupt world markets. The tin case and a few similar incidents are regarded as forerunners of this eventuality. It is undoubtedly true that the Soviet Union, augmented by its gold store and the production of other bloc countries, have this capability and over time it will increase. But it does not seem likely that the capability will be so used except under unusual circumstances. The bloc looks to trade as an important adjunct to the domestic economy and disruption of markets would not contribute to this goal. Even the bloc's political objectives generally run in terms of making friends, becoming respectable, and winning influence through good deeds. There will unquestionably be instances where the bloc's activities are disruptive, but the general trend at this time seems to be in terms of normalized trade and the economic and political benefits it confers.

IMPLICATIONS FOR U.S. POLICY

Just a few obiter dicta on U.S. policy: At least four important areas of U.S. foreign economic policy are conditioned by Soviet-bloc foreign economic policies. They are (1) foreign economic and military assistance, (2) strategic trade controls, (3) the mechanics of

U.S. foreign trade, and (4) U.S. trade with Soviet Union and the rest of the bloc.

U.S. foreign assistance, at least in part, serves the purpose of preventing those conditions from arising which the Soviet Union can exploit to its advantage. The apparent success of Soviet efforts with foreign assistance have made some wonder whether or not the United States should emulate the Soviet Union in the conduct of its foreign assistance program. It must be remembered, however, that the Soviet program is an imitation of U.S. aid, particularly as embodied in the Marshall plan and Truman doctrine. Furthermore, the objectives of the two nations must be borne in mind. The Soviet Union hopes to break Western alliances and gain political influence by selective use of small amounts of assistance and a great deal of publicity. The United States is interested in economic development, hoping thereby to create conditions helpful to U.S. interests in terms of economically and politically stable democratic regimes. If the United States were to try to imitate the Soviet Union, it would do violence to its basic aims and would probably spend its entire time and substance chasing around putting out fires. The United States requires an assistance program based coordinately upon the public development needs of its friends and allies and those neutrals who share the same general public philosophy, and upon the U.S. ability to supply public loans and grants. Such an effort should be supplemented by large-scale private investment, fostered by whatever public measures are necessary to encourage this development. This program would not be insensitive to what the Soviet Union does, but would not be built around Soviet actions, either in fact or in the minds of the American people or of the potential recipients.

Strategic trade controls now have limited scope and are probably doomed, as they should be. Such measures are best suited for imposition in the likelihood of hostilities within a reasonably short period. Otherwise, the potential enemy insulates himself against the deprivation and in time is better off than would have been the case in the absence of the embargo. An open society such as the West cannot long deprive even a potential enemy of technology and goods unless war is imminent. To attempt to do so gives the opposition a tremendous propaganda weapon and whipping boy for all the world's trade ills, and in fact does little to prevent the development of the opposition. If in the wisdom of the Government, some specialized goods should not be sold to the bloc, this can be handled by an ordinary export licensing system and through informal representations to allies.

It is often thought that the United States is at a decisive disadvantage in trade because its trade is in private hands, whereas in the Soviet Union all trade is controlled by the political leadership. The point is highly debatable on political grounds and on economic grounds there is little or no argument. The use of a state-trading agency by the U.S. Government to meet the Soviet Union in competition would give every advantage to the opposition, most notably the initiative. It would be relatively easy for the Soviet Union, with or without the collusion of its trading partners, to keep a U.S. state trading agency in continual chaos and to bankrupt it almost at will. The strength of the United States lies in the fact that it embodies a

better and different system of trading. To adopt the opposition's methods would be to lose before starting.

Within the limits of the security of the United States there is no reason why the Soviet Union should not be able to buy what it pleases in this country. But there is certainly no reason for an intergovernmental agreement—to do so would be to set a bad example and would not be in line with the way the United States does business. Credit extension is also a private matter. There seems to be little advantage in continuing to hold lend-lease and tsarist debts against the Soviet Union. It would seem more desirable simply to let U.S. exporters decide on credit matters on the merits of each case. There can be no justification for U.S. Government credit. It does not make sense for the United States to make loans to the Soviet Union when that country is making loans to other countries for the specific purpose of undermining the United States. Let the Soviet Union buy what it will; let Americans buy what they will; all within the traditional framework of U.S. trade and without favoritism or prejudice by the Government.

U.S. foreign economic policy must have an orientation of its own, built upon U.S. goals and conducted within the framework of U.S. practices. Reliance upon the enterprise system, properly encouraged by the Government, with direct Government action when the activity is clearly not within the scope or capabilities of private individuals, should be the keynote of U.S. policy. The United States should do or not do what is in its interests, regardless of what the Soviet Union does or might do. U.S. policy should not ignore Soviet actions, but these actions should be and in fact are only a part of the considerations involved in the discharge of the global responsibilities of the United States.

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STATISTICAL APPENDIX

TABLE 1.—*World exports by origin and destination, 1957*

[Billions of dollars]

Exporting area	Area of destination					
	Total free world	Soviet Union	Eastern Europe	China	Total Sino-Soviet bloc [1]	World [2]
Free world industrialized [3]	65.3	0.64	[4] 1.01	0.30	1.95	70.2
All primary exporting areas	28.1	.35	.34	.23	.92	29.7
Total free world trade	93.4	.99	1.35	.53	2.87	99.8
Soviet Union	.96	----	2.55	.54	3.23	4.4
Eastern Europe	1.19	1.98	1.41	.30	3.83	5.5
China	.60	.74	.26	----	1.53	2.1
Total Sino-Soviet bloc [1]	2.75	2.94	4.21	1.34	8.49	11.5
World [2]	96.2	3.9	5.5	1.9	11.4	111.3

[1] Including trade with Mongolia, North Vietnam, and North Korea.
[2] World totals include special categories, unallocated exports, and some statistical discrepancy due to the utilization of various sources of data.
[3] Western Europe, United States, and Japan.
[4] Excluding trade between Eastern and Western Germany.
Source: "Economic Bulletin for Europe," Economic Commission for Europe, Geneva, vol. X, No. 2, August 1958, table 3, p. 38.

TABLE 2.—*Soviet and East European trade, 1938–57*

[Millions of U.S. dollars]

	1938	1948	1952	1953	1954	1955	1956	1957
World: [1]								
Imports	23,200	58,500	79,200	75,800	79,000	88,200	97,200	106,400
Exports	20,700	53,000	72,300	73,300	76,100	82,800	92,000	98,800
Soviet Union:								
Imports	268	----	----	----	----	3,061	3,613	3,938
Exports	251	----	----	----	----	3,469	3,669	4,381
Bulgaria:								
Imports	60	----	----	200	196	195	248	----
Exports	68	----	----	206	233	230	339	----
Czechoslovakia:								
Imports	239	757	----	----	----	1,053	1,186	1,385
Exports	295	753	----	----	----	1,176	1,387	1,356
East Germany:								
Imports	----	----	773	983	1,096	1,173	1,334	1,615
Exports	----	----	739	968	1,280	1,278	1,407	1,811
Hungary:								
Imports	123	167	----	----	----	534	456	665
Exports	155	166	----	----	----	609	493	497
Poland:								
Imports	248	516	863	774	904	932	1,022	1,251
Exports	225	533	780	831	869	920	985	982
Rumania:								
Imports	137	----	----	----	----	384	352	----
Exports	157	----	----	----	----	391	395	----

[1] Excluding Soviet Union, Eastern Europe, and mainland China. Mainland Chinese data has not been available since 1948.

TABLE 3.—*Soviet trade, 1938–57*

	Imports				Exports			
	1938	1955	1956	1957	1938	1955	1956	1957
Total trade	1,422.9	12,242.2	14,452.5	15,751.3	1,331.9	13,874.3	14,446.3	17,526.0
Afghanistan	13.7	43.7	60.5	82.7	14.8	54.4	73.0	72.5
Albania	-------	21.9	32.6	56.4	-------	60.7	72.9	130.6
Argentina	4.2	112.7	51.8	83.3	.3	95.8	76.5	18.7
Austria	4.6	142.2	258.6	272.4	2.2	55.0	43.7	72.1
Belgium	64.2	60.8	128.2	122.7	116.8	96.5	116.9	112.7
Bulgaria	-------	485.5	578.7	792.4	-------	510.0	433.6	690.1
Burma	1.0	67.3	49.1	36.2	-------	.6	17.1	25.9
Canada	30.6	10.5	98.3	35.6	1.5	7.8	8.6	16.8
China	68.5	2,574.0	3,056.9	2,952.5	44.1	2,993.4	2,932.1	2,176.4
Cuba	-------	143.1	58.5	188.4	-------	-------	-------	-------
Czechoslovakia	19.4	1,546.0	1,585.8	1,542.3	13.2	1,423.8	1,494.8	2,205.2
Denmark	5.1	39.8	25.6	45.5	27.4	30.5	33.1	52.1
Egypt	.3	61.5	201.4	443.7	12.1	44.1	153.7	328.8
Finland	3.4	511.3	584.8	660.8	10.8	424.7	459.1	601.8
France	39.4	144.4	202.3	190.1	59.7	238.8	278.5	268.0
Germany, East	67.2	2,025.7	2,505.3	3,057.4	88.3	1,914.7	2,285.4	3,448.2
Germany, West		95.1	272.5	247.4		117.1	167.2	285.7
Ghana	-------	46.2	33.0	75.7	0	0	0	0
Greece	1.5	9.4	25.2	38.4	17.3	17.1	28.9	48.9
Hungary	-------	586.1	483.3	426.9	.1	461.2	507.4	998.9
Iceland	0	39.9	49.9	55.1	0	41.3	39.7	46.3
India	-------	17.6	73.2	167.8	3.6	29.3	161.6	338.6
Iran	63.8	76.2	60.6	74.1	58.0	89.8	76.7	126.6
Italy	-------	65.2	103.9	181.5	.1	69.9	135.7	116.6
Korea, North	-------	163.0	204.8	250.2	-------	176.6	215.3	239.4
Malaya	-------	87.2	335.9	195.2	-------	0	1.3	2.4
Mongolia	38.5	215.1	217.2	200.5	69.8	486.8	413.6	270.7
Netherlands	102.5	133.7	39.6	81.7	92.8	131.4	167.4	131.0
Norway	9.9	60.2	86.1	72.2	21.6	70.4	78.2	84.3
Poland	1.5	1,146.6	1,133.0	1,023.6	7.8	1,727.4	1,429.0	1,723.4
Rumania	.8	839.3	941.4	760.2	.6	1,070.9	848.1	1,003.0
Sweden	27.4	68.0	104.1	100.8	13.5	114.2	138.6	12.57
Switzerland	11.8	16.4	7.5	14.6	12.2	33.6	46.4	40.0
Turkey	22.7	20.5	26.4	21.9	22.7	29.8	23.9	35.7
Union of South Africa	.6	37.9	51.3	106.8	7.6	0	2.1	1.1
United Kingdom	240.3	284.3	297.6	448.4	375.1	676.6	592.6	755.7
United States	405.9	2.2	19.2	40.6	96.7	95.2	108.7	63.7
Uruguay	-------	39.9	49.2	72.5	-------	1.2	11.4	.5
Yugoslavia	-------	70.0	198.7	227.3	.1	65.6	276.2	292.4

Source: "Yearbook of International Trade Statistics, 1957," vol. I, New York, 1958, p. 576.

TABLE 4.—*Czechoslovakian trade, 1955–57*

[Millions of korunas]

	Imports			Exports		
	1955	1956	1957 January-September	1955	1956	1957 January September
Total trade	7,579	8,537	7,109	8,467	9,988	6,785
Soviet Union		2,808	2,646		3,084	1,837
China		478	369		466	454
Bulgaria		229	246		259	166
East Germany		852	686		1,010	675
Hungary		467	351		424	395
Poland		554	351		714	403
Rumania		205	148		252	181
Argentina		86	43		82	25
Austria	120	155	142	135	144	100
Belgium	57	91	61	61	83	44
Brazil		146	92		145	78
Denmark	43	33	54	40	55	34
Finland	59	80	61	130	157	138
France	53	91	54	51	64	73
West Germany	119	280	317	224	364	282
Greece	13	25	28	18	35	36
Iceland	15	29	19	21	29	23
Italy	61	73	51	84	89	71
Malaya		56	73		11	8
Netherlands	88	135	117	119	133	95
Norway	57	63	48	57	72	35
Portugal	12	10	9	8	7	3
Sweden	37	73	59	48	80	39
Switzerland	144	207	113	139	153	104
Turkey	148	122	97	143	147	129
United Kingdom	202	193	168	163	178	149
Yugoslavia		48	15		97	93

Source: "Yearbook of International Trade Statistics, 1957," vol. I, New York, 1958, p. 165.

TABLE 5.—*East German trade, 1953–57*

	Imports				Exports			
	1953	1955	1956	1957	1953	1955	1956	1957
Total trade	3,930.1	4,690.9	5,334.9	6,461.9	3,870.0	5,112.6	5,629.0	7,243.0
Albania	3.7	5.1	7.7	10.8	12.0	24.6	18.3	17.7
Austria	67.0	51.6	64.9	56.8	51.8	53.4	42.3	54.4
Belgium-Luxembourg	62.7	46.4	45.9	33.2	27.0	25.1	31.6	38.9
Brazil	0	.1	15.5	33.9	.2	2.1	1.8	6.6
Bulgaria	72.1	124.0	137.4	106.4	79.7	85.0	129.7	119.2
China	212.1	346.6	343.6	354.2	241.5	389.6	379.7	423.0
Czechoslovakia	233.4	282.9	421.4	475.6	226.5	375.3	439.0	562.2
Denmark	54.4	60.2	55.4	39.6	49.2	56.1	56.0	50.8
Egypt	14.9	18.2	38.4	69.1	4.9	25.4	31.8	93.0
Finland	33.6	69.1	70.0	64.2	40.4	78.8	81.3	86.0
France	16.4	29.8	37.1	67.0	11.5	16.9	16.3	30.6
Germany, West	250.8	524.4	584.7	735.5	278.8	545.7	616.0	818.6
Hungary	137.3	248.4	156.7	188.3	170.4	184.5	190.7	252.9
India	0	5.3	13.9	31.4	3.1	12.8	23.2	29.2
Italy	21.5	42.0	30.4	20.3	19.6	38.2	31.0	22.1
Korea	0	.4	6.7	10.1	28.4	30.5	33.2	27.2
Netherlands	109.9	117.4	108.5	81.4	71.9	72.9	85.1	84.5
Norway	29.4	32.9	30.6	32.7	30.0	29.0	40.3	27.2
Poland	447.7	458.5	419.4	411.8	434.0	495.0	556.0	604.5
Rumania	59.7	151.6	116.6	84.2	125.0	99.1	114.2	135.6
Sweden	53.2	51.9	49.0	57.6	50.9	54.7	58.3	52.3
Turkey	1.9	46.9	63.1	66.1	8.6	57.1	54.0	72.8
United Kingdom	66.3	69.6	69.5	132.3	37.0	48.3	48.8	59.9
United States	37.9	21.4	23.7	14.5	34.9	29.3	28.4	24.3
U.S.S.R	1,833.5	1,688.5	2,228.3	2,943.9	1,733.6	2,062.7	2,277.2	3,238.8
Yugoslavia	0	6.9	14.1	24.2	0	7.6	13.4	34.7

Source: "Yearbook of International Trade Statistics, 1957," vol. I, New York, 1958, p. 230.

TABLE 6.—*Polish trade, 1947–57*

Regions and principal countries	Imports				Exports			
	1947	1955	1956	1957	1947	1955	1956	1957
Total trade:								
Million rubles	-------	3,727.2	4,087.4	5,066.1	-------	3,654.0	3,899.1	3,899.9
Million U.S. dollars	317.5	931.8	1,022.0	1,251.0	248.2	913.5	974.8	975.0
	Percentages							
Africa	0.7	1.1	0.6	1.4	0.1	0.6	0.8	1.2
United States	16.0	-------	.2	4.5	.3	-------	2.4	2.7
Argentina	1.0	3.1	.5	.4	.5	2.4	.3	.3
Brazil	4.8	-------	.8	1.3	.7	-------	1.3	1.3
China	.0	3.8	3.4	3.0	.0	3.8	5.2	4.6
Austria	.7	1.9	2.6	2.8	4.7	3.1	2.5	3.3
Belgium	1.8	1.3	1.0	1.1	1.7	.4	.7	.5
Bulgaria	2.3	.7	1.1	1.2	1.2	1.0	.7	1.2
Czechoslovakia	2.0	8.5	10.1	6.2	6.0	8.2	7.8	6.2
Finland	2.3	1.7	1.7	2.0	3.0	3.6	3.4	4.3
France	4.0	3.7	3.2	1.8	2.9	1.4	3.2	4.1
Germany, East	2.3	13.1	13.2	13.2	3.9	13.7	11.0	12.9
Germany, West	.4	2.5	5.5	4.4	.3	3.2	5.4	5.1
Hungary	1.2	3.3	2.3	1.7	1.4	2.9	2.5	3.3
Italy	.5	.9	.7	1.3	2.3	.7	.8	1.0
Rumania	.1	1.3	1.4	1.2	.3	1.4	2.0	1.7
Sweden	9.0	1.6	1.5	1.7	16.6	2.3	2.7	1.7
Turkey	0	1.3	1.1	.9	0	1.7	.6	1.0
United Kingdom	8.6	4.5	3.2	3.8	5.4	8.5	8.1	6.5
U.S.S.R.	25.1	33.7	35.3	33.4	28.4	30.7	27.7	26.5
Australia	0	3.0	3.4	3.4	0	0	0	.1
Total trade	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: "Yearbook of International Trade Statistics, 1957," vol. I, New York, 1958, p. 473.

TABLE 7.—*Commodity composition of Soviet trade, 1913–57* [1]

[Percentages]

Item	1913	1928	1938	1950	1954	1957
EXPORTS						
Machinery and equipment	0.3	0.1	5.0	16.3	21.5	14.9
Fuels, raw materials	42.8	63.1	57.7	50.7	58.5	64.1
Coal	.1	.6	1.0	.3	1.1	4.3
Petroleum and products	3.3	13.5	7.8	1.5	4.2	9.1
Ferrous-nonferrous metals	.6	.8	1.6	12.6	18.2	14.7
Lumber	6.3	6.8	14.1	2.0	2.6	3.1
Other timber	4.5	5.1	6.0	.9	1.0	1.2
Cotton	-------	-------	1.9	11.7	12.1	5.9
Fiber-flax	6.2	3.1	1.7	.5	.1	.3
Furs	.4	15.1	9.4	3.3	1.2	-------
Other	21.4	18.1	14.2	17.9	18.0	25.5
Grain	33.3	3.3	21.3	18.5	12.2	12.9
Consumer goods	23.6	33.5	16.0	14.5	7.8	8.1
Meat, dairy products, eggs	12.0	13.1	.3	4.6	.1	-------
Sugar	1.8	4.3	2.5	1.0	.0	-------
Fabrics	3.0	6.5	4.8	2.7	1.6	-------
Other	6.8	9.6	8.4	6.2	5.2	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0
IMPORTS						
Machinery	15.9	23.9	34.5	27.1	32.6	23.9
Fuels, raw materials	63.4	67.8	60.7	56.6	46.2	55.5
Coal	5.5	.1	-------	2.3	3.7	2.0
Petroleum products	.4	-------	1.2	5.5	3.3	3.0
Ores and concentrates	.1	-------	2.6	1.7	3.6	11.5
Ferrous and nonferrous metals	6.8	13.7	25.9	9.3	5.8	7.4
Natural rubber	2.9	2.5	3.5	3.8	.4	2.7
Cotton	8.3	16.3	1.8	.2	.2	3.1
Other textile raw materials	10.0	10.3	7.9	5.5	6.8	-------
Peanuts, soybeans, and other oilseeds	.1	-------	.1	3.1	3.6	2.0
Other	29.3	24.9	17.7	25.2	18.8	25.8
Consumer goods	20.7	8.3	4.8	16.3	21.2	20.6
Meat, dairy products, eggs	.7	-------	.3	1.9	6.0	-------
Sugar	-------	.1	.0	3.8	1.9	-------
Fruit, vegetables	2.8	1.8	1.9	1.0	1.6	-------
Fabrics	2.7	.1	.4	4.7	4.3	-------
Other	14.5	6.3	2.2	4.9	7.4	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0

[1] Narodnoe Khozaistvo S.S.S.R.: Statisticheskii Sbornik, Tsentral'noe Statisticheskoe Upravlanie * * * S.S.S.R. (Moscow, 1956), p. 217.

TABLE 8.—*Commodity composition of Soviet and East European trade, 1956*

[Percentages]

	Bulgaria	Czecho-slovakia	East Ger-many [1]	Hungary	Poland	Rumania	Soviet Union
EXPORTS							
Machinery and equipment	3.5	40.3	60.4	30.3	15.6	10.1	19.5
Consumer goods	15.3	15.4	7.8	15.4	63.8	3.5	5.6
Fuels and raw materials	36.9	36.9	29.8	32.2	8.9	62.6	66.1
Food	44.3	7.4	2.0	31.1	11.7	23.8	8.8
IMPORTS							
Machinery and equipment	42.3	17.2	4.7	12.2	33.2	20.5	26.6
Consumer goods	17.3	3.2	17.9	4.1	48.6	4.4	13.1
Fuels and raw materials	38.7	55.0	41.3	70.8	5.8	68.2	55.1
Food	1.7	24.6	36.1	12.9	12.4	6.9	5.2

[1] 1955.

Source: "Economic Survey of Europe, 1957", Economic Commission for Europe, Geneva, 1958, table XXXIII, pp. A53–A59. Categories are not identical for all countries.

SOME FINANCIAL ASPECTS OF SOVIET FOREIGN TRADE

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Financial factors play a less important role in the Soviet economy than they do in the economies of Western nations. This is also true of Soviet foreign trade in comparison with the foreign trade of other nations. Financial factors nevertheless have osme significance and will continue to have significance for the conduct of Soviet international transactions as long as trade is not conducted on a strictly barter basis, prices and exchange rates are quoted, and gold and foreign exchange are recognized as having value and serving as international legal tender.

The following topics are discussed below: (1) Trends in the official ruble exchange rate, (2) the disequilibrium character of the ruble exchange rate, (3) the reflection of the overvalued ruble on enterprise and budget accounts, (4) Soviet international price policy and the foreign trade accounts, (5) the impact of Soviet foreign trade on internal financial stability, (6) Soviet gold policy, and (7) payments agreements.

1. *Trends in the official ruble exchange rate* [4, pp. 292 ff.; 16, pp 198–199]

An exchange rate is the price of one currency in terms of another or in terms of gold, the common denominator of currencies. In a market in which trade flows freely and prices and exchange rates are allowed to seek their own levels, the relative prices of two currencies will reflect, roughly, the relative purchasing power of each currency in its own country, particularly of internationally tradeable goods. Neglecting the refinements,[2] it could be said that an exchange rate between two currencies which (1) more or less achieves a balance of payments without controls, and (2) roughly reflects the price differentials between countries of "tradeables," is an equilibrium exchange rate.

Since World War I, of course, the exchange rates of many Western nations have failed at one time or another to meet these specifications and have been maintained temporarily at disequilibrium levels by controls. In most cases, disequilibrium has eventually led to devaluation, as a last-resort measure, to achieve equilibrium. It is no exaggeration to say that over the past 30 years the exchange rate of no Western nation has been as far out of line from its equilibrium value as the Soviet ruble exchange rate. And no Western nation has applied such extensive controls to foreign trade, controls which are an integral part of the planning organization and which, among other

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[2] Neglecting here capital flows, levels of employment and unemployment, and income-elasticities of demand for imports.

things, make it possible for the Soviets to maintain a balance on current account with a disequilibrium exchange rate. The Soviet exchange rate has typically been so far out of line and controls have operated so successfully, that it seems fair to describe the rate as no more than an accounting device for converting foreign currency prices of Soviet exports and imports into rubles for the purpose of constructing foreign trade accounts in local currency.

While the ruble exchange rate has been a fictitious one in the sense that it has little basis in terms of relative commodity prices, the Soviets have seen fit, from time to time, to make exchange rate adjustments. First, these will be traced briefly and then their relationship to Soviet internal price trends will be indicated.

After the Revolution, the ruble was maintained at its prerevolutionary exchange rate. While the gold content of the ruble was specified at 0.774234 grams, [4, p. 297] it was typically quoted in terms of dollars as having a value of $0.5146. This nominal value of the ruble was maintained until the U.S. flight from the gold standard and devaluation of January 1, 1934. Devaluation reduced the value of the dollar from $20 to $35 an ounce of gold. Concomitantly, the ruble-dollar rate changed from $0.5146 to $0.8712 per ruble. After this date, the ruble was typically quoted in terms of francs (one of the few currencies still tied to gold) at 13.1 francs to a ruble.

The next change occurred when, in a decree of November 11, 1935, the Soviets set a special rate for tourists of 3 francs to the ruble to be effective as of January 1, 1936. On April 1, 1936, this rate was extended to cover all foreign transactions, including primarily commodity trade. The change of April 1, 1936, was, of course, a massive devaluation leaving the ruble worth less than 23 percent (1/4.38) of its previous value. It's dollar value fell from $0.8712 to $0.1992 (and franc value from 13.1 to 3.0 francs).

This situation was soon altered. In October 1936, the franc left gold and was devalued raising the franc-ruble ratio from 3 to 4.5. Ostensibly because of this devaluation, the Soviets redefined the ruble in terms of dollars on July 19, 1937. The new valuation involved a slight devaluation of the ruble from $0.1992 to $0.1887 (or 5.3 rubles to the dollar).

The ruble maintained nominal stability from 1937 until 1950. On March 1, 1950, the ruble was revalued upward by 32.5 percent and specifically defined as having a gold content of 0.222168 grams of gold and therefore worth 4 rubles to the dollar. This change was made, according to the Soviets, because of the loss in value of the dollar as a result of post-World War II inflation. (The validity of this claim will be examined below.) Only one further change has been made since 1950: The tourist rate which had been 4 rubles to the dollar along with all other transactions, was devalued to 10 rubles to the dollar in April 1957. The 4-ruble-to-the-$1 rate remains in force for all other transactions.

2. *A disequilibrium exchange rate: The overvalued ruble* [3]

As we have already noted, the exchange rate which was in force until 1936 was the same, in terms of gold, as that which prevailed

[3] The materials presented in this section contain some of the preliminary results of a larger study of Soviet foreign trade pricing which is nearing completion. The empirical part of this study compares Soviet export and import unit values with Soviet domestic prices and world prices, respectively, for a number of prewar and postwar years [8].

before World War I although the rates in terms of individual foreign currencies were often quite different due to the widespread revaluations in Europe after World War I and during the thirties. Under relatively stable domestic conditions, it would appear unlikely that the international value of the ruble could have remained in "equilibrium" without any change of its par value over the 25-year period. As it was, the Russian economy underwent, as is well known, a devastating war and a complete change of government and economic organization. The major consequence of these events from the point of view of the international value of the ruble was the hyperinflation, which gripped the Soviet economy after World War I. Before hyperinflation was finally eliminated by the monetary reform of 1924, the internal price level was many billions of times higher than it had been right after the Revolution [2]. It obviously makes little sense to talk of equilibrium exchange rates under such conditions.

How close to a purchasing power parity equilibrium the ruble was right after the reform in 1924 I cannot say. One observer states that "It was probably sometime in 1926 or 1927 that foreign trade became entirely divorced from the internal cost of export goods or the ruble prices of imported goods" [9, p. 170]. This was certainly the case by 1929 (and probably true for 1926–27). Comparisons of average unit values of a substantial sample of Soviet export goods with internal wholesale prices of the same commodities indicate that, on the average, Soviet exports were being sold at less than 40 percent of cost. Around this average there was a very large dispersion with, for example, manganese and iron ores selling at 50 percent above domestic wholesale price, coal and coke roughly at domestic price, and petroleum products at one-fourth domestic price. One might reasonably ask: Why, on the average, did the Soviets sell so much below domestic wholesale price? The answer is simple: With an overvalued exchange rate, the Soviets, if they were to sell abroad, had to sell at below cost in order to compete on world markets. This did not necessarily involve them in a real loss, however. For they were compensated by being able to import needed goods at a similar or greater percentage below domestic cost or price.

This type of transaction can be handled very expeditiously by a country which has nationalized its industry and foreign trade. With an overvalued exchange rate, the foreign trade monopoly is willing, for example, to export abroad for 500 rubles a commodity which costs 1,000 rubles to produce if it can use the 500 rubles of foreign currency earned to import a commodity which costs, say 1,100 rubles to produce domestically. (The difficulty in defining "dumping" under these circumstances is obvious.) A free enterprise economy, on the other hand, in which exports and imports are handled by entirely different persons and enterprises, would find this an unenviable situation (in the absence of direct controls) as profitable opportunities for imports expanded at the same time that profitable opportunities for exports contracted. Presumably under these circumstances, a capitalist nation would be forced either to devalue or to reduce the volume of trade by restricting imports to an amount which could be financed by exports (abstracting from reserves and capital flows). The foreign trade monopoly, as indicated, would be under no such constraint but could maintain the level of trade undiminished simply subsidizing

exports out of profits from imports (the mechanics of this are described below).

The gap between export prices on the one hand and domestic wholesale prices and costs on the other increased during the first half of the thirties. This can be inferred from two sets of observations: (1) Comparison of price trends from 1929 to 1935, and (2) direct comparison of export unit values with domestic wholesale prices for 1935. Over the period 1929–35, a study published by the League of Nations [12] indicates that Soviet export prices declined to one-third of their previous level. This decline was not unique to Soviet exports, of course, but reflected the generally depressed conditions of the period. Unlike the situation in other nations where falling export prices were matched in part by falling internal prices as a result of high levels of unemployment, Soviet internal costs and prices were rising as the result of internal inflation [7]. Consumers' goods prices rose by 400–500 percent over the 6-year period. The prices of basic industrial goods rose very little—by only 6 or 7 percent.[4] These prices did not reflect costs, however. Costs had been rising very rapidly. Wage rates, the basic cost element, rose by almost 300 percent over the period. The small increase in prices of basic industrial goods reflects a deliberate Soviet policy to keep producers' goods prices stable despite rising costs by the use of liberal subsidies. To summarize: The rise in domestic prices, and especially in costs, and the fall in export prices point to an increase in the gap between domestic prices and costs and export prices.

Direct comparison of unit values of a sample of exports with domestic wholesale prices (many of which are undoubtedly below cost) supports the above results. By 1935, every group of items sampled was sold abroad at below domestic wholesale price. On an average, domestic wholesale prices were 8 times as high as export unit values[5] including petroleum products and 5½ times as high excluding petroleum products.

Without doubt, the disequilibrium character of the ruble exchange rate was at a peak in 1935. In 1936, as we have seen, the ruble underwent a 77 percent devaluation and this certainly served to bring the exchange rate closer into line with domestic costs and prices. The devaluation may have been conceived as part of the more general price reform which was accomplished in 1936. As we have seen, prices of basic industrial materials had been kept stable in the face of rising costs for a number of years. In 1936, these prices were increased by more than 50 percent in a general attempt to eliminate subsidies and thereby equalize costs and wholesale prices. This price increase had the effect, of course, of partly offsetting the effectiveness of the devaluation in bringing domestic wholesale prices and export prices into line.[6]

This, in turn, was offset, however, by the upswing in world market prices in general; the prices (measured in the currencies of the major trading nations) which the Soviets were able to obtain for their exports rose by some 50 percent over the next 2 years [12].

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[4] This excludes petroleum. Inclusive of petroleum products, prices rose by 55 percent.

[5] Domestic cost-prices, adjusting for subsidies, must have exceeded export unit values by a factor of 12.

[6] It did not affect, of course, the relationship between domestic cost-prices and export prices.

The devaluation of 1936, then, may be viewed as an attempt to reduce the disequilibrium character of the ruble exchange rate—to bring export and domestic prices into closer alinement. Whether deliberately or not, the degree of devaluation was not extreme enough to achieve this putative objective. Despite the favorable upswing in export unit values noted above, the ratio of domestic prices to export unit values in 1937 was little less than 3 for all commodities, about 1.5 for basic industrial goods excluding petroleum, and about 2.5 including petroleum. This is considerably closer to equilibrium than the situation which prevailed in 1935 but is still far enough out of line to have necessitated the use of the most stringent controls to keep trade in balance were such controls not required in any case as part of the planning structure.

The Soviets revalued the ruble upward in 1950 by almost one-third from about $0.19 to $0.25 (or from 5.3 to 4 rubles to the dollar). As already noted, the reason given for this revaluation was the erosion of the value of the dollar due to inflation after World War II. Furthermore, the Soviets could point to the fact that their prices began a secular decline after the monetary reform of December 1947, while Western prices continued to rise. These trends notwithstanding, the critical fact is that the Soviets experienced very substantial cost and price inflation from 1936 until 1948, and an upward revaluation of the ruble would seem to have been justified only if it tended to bring Soviet costs and prices more into line with costs and prices (especially of traded goods) in other countries (as indicated by the relationship of Soviet domestic prices to export unit values). Precise comparisons for 1950 are impossible because Soviet export unit values are not available. However, rough indicators of the trends from 1937 to 1950 in domestic prices and in export prices provide sufficient clues.

Between 1938 and 1950, the world index of export prices [19, p. 28] rose from 40 to 89 (1953=100). The index of export prices of industrial nations rose from 45 to 85. Since Soviet foreign trade prices more or less follow world prices, it is probably not too far off the mark to assume that the unit values of Soviet exports (in world prices) roughly doubled from 1937 to 1950. Over the same period, the domestic prices of both basic industrial goods and consumers' goods produced in the Soviet Union roughly tripled [7]. Since domestic prices substantially exceeded export unit values in 1937, clearly the gap was increased by the relative price trends from 1937 to 1950 and the exchange rate was even more overvalued in 1950 than in 1937. We must conclude, therefore, that the upward revaluation of the ruble in 1950 increased rather than decreased the disequilibrium character of the ruble exchange rate. It is difficult to find economic justification for the 1950 revaluation. Unlike the 1936 devaluation, the motivation in this case appears to be largely political rather than economic: to boost the ruble for its forthcoming role as the "key" currency in the rapidly growing intra-Soviet bloc trade.

The trend since 1950 has been in the direction of "equilibration." However, the rate of change is slow and the distance to be covered, large. Export prices of industrial nations have risen since 1950 and in 1956 stood at a 20 percent higher level. Undoubtedly, Soviet export prices have risen to a somewhat similar extent. On the other hand, Soviet internal prices have been falling steadily. In 1956,

prices of basic industrial goods and of consumers' goods were 15 and 25 percent, respectiveiy, below 1950 levels. Clearly, the gap between domestic prices and export unit values is still far from bridged. A summing up of the trends since 1937 leads one to expect that in 1956 domestic prices should have been roughly 2½ times export prices. In the way of an independent check, direct comparison of a sample of domestic prices and export unit values for 1956 shows ratios of 2 and 2.5, respectively, for nonconsumers goods and for all goods including consumers' goods (adjusted for turnover tax).

The little information available regarding Soviet domestic price trends since 1956 indicates relative stability over the past 2½ years. Nor have world prices, and presumably Soviet export prices, changed very much. This leads to the conclusion that as of mid-1959 the ruble is still a substantially overvalued currency at the official exchange rate as it has been since at least 1929 and probably throughout the whole Soviet period.

3. *Enterprise and budget accounts and the overvalued exchange rate* [18]

The institutional use of an overvalued exchange rate has its reflection in the accounts of export and import organizations and the state budget.

Purchases and sales in international markets are conducted by Soviet export and import organizations. The export and import organizations serve as intermediaries between the domestic producers or sales organizations and the foreign buyers and sellers. There are about 25 of these organizations and they each cover either the export or import of an important group of traded commodities. [11, pp. 256–269.]

The export organizations purchase from the domestic producers, wholesalers or retailers, the commodities they are scheduled in the plan, to sell abroad. The purchase price, in the case of basic industrial goods is the normal wholesale price which any other state enterprise or organization pays for the same commodity. Consumers' goods are also procured at wholesale price. If, however, the export organization purchases consumers' goods from the retailer, this involves excusing it from having to pay the very large sales (turnover) tax levied on almost all consumers' goods sold to the population. This tax amounts, on the average, to a 100-percent markup over wholesale price on all goods sold by state and cooperative stores to the population [6, ch. 10]. The export organizations then attempt to sell their stock of goods abroad presumably at as high a price as they can obtain with certain exceptions of a political nature. (Soviet writers constantly stress that foreign trade organizations should take advantage of capitalist business cycles to buy cheap and sell dear.) In intrabloc Soviet trade, the prices of most imports and exports are determined simultaneously when the bilateral agreements are drawn up. These prices will usually bear some relationship to world prices but, since the ruble has been and is overvalued, very little relationship to domestic wholesale or retail price. The export organization is credited for export sales at the foreign price converted to rubles at the official exchange rate. Again, since the ruble is overvalued, receipts from sales will usually be below cost of purchase and will involve the ex-

port organization in a loss. The loss is financed by a subsidy to the export organization from the state budget.

For example, suppose Avtoeksport, the organization which sells motor vehicles abroad, carries out the declared Soviet intention of exporting the little Moskvich to the United States for around $1,200. Assuming transport and other costs amount to $200, the account of Avtoeksport is credited with $1,000, or 4,000 rubles at the official exchange rate. The Moskvich sells in the Soviet Union for 25,000 rubles. Assume, for sake of illustration, that this retail price includes a 100-percent sales tax markup. The wholesale price, or cost to Avtoeksport of the automobile will be 12,500 rubles. Avtoeksport sustains a loss on the transaction of 8,500 rubles (12,500 minus 4,000) which is refunded in due course by a state budget subsidy.

The situation is very much the same in the case of import organizations. Presumably, they attempt to purchase goods from abroad at a low price. The foreign price at which they consummate a transaction is converted to rubles at the official exchange rate and this constitutes the major expenditure item of the organization. In turn, they sell the commodity to domestic wholesalers or retailers at the internal price. Since the ruble is overvalued, this will usually be a much higher price than the purchase price and the organization will earn a large profit which is, after other minor expenses are deducted, paid into the State budget. This difference between the cost of purchasing a commodity abroad and internal price is, as far as I have been able to determine, often labeled by the Soviets a "tariff" and is the major form of tariff levied by them at present.[7]

The case of the import organization is also easily illustrated. Suppose that Mashino import purchases for $50,000 oil-drilling equipment which has an internal wholesale price of 500,000 rubles. Its accounts will receive a credit of 500,000 rubles and a debit of 200,000 rubles, or $50,000 converted at 4 rubles to the dollar. In due course, the 300,000 rubles (deducting minor expenses) is transferred to the budget as customs receipts.

While it is quite clear in the Soviet literature that the losses of export organizations are compensated in the form of budget subsidies and the profits of import organizations are paid into the budget as customs receipts, the actual budget accounts are not usually presented in sufficient detail to make it possible to distinguish these items directly. With respect to exports, the principal difficulty is that budget expenditures on foreign trade and domestic trade are usually not distinguished, and sometimes, apparently, only expenditures on domestic trade are reported. Fortunately, for the year 1956, the Minister of Finance, A. G. Zverev, states that expenditures on internal trade alone, were 1.1 billion rubles [15, p. 25] and another source [4, p. 347] presents a figure of 12.2 billion rubles as the measure of budget expenditures on trade. Apparently the difference, 11.1 billion rubles, was allocated to foreign trade. Now while some of this latter amount must have been devoted to investment in trading organizations, probably the bulk of it repre-

[7] Except for tariffs on imports by or gifts to private Soviet citizens from abroad.

NOTE.—I was informed at Amtorg that the prewar tariff schedules are still in effect. But these are ignored in the current Soviet literature on foreign trade and probably because they tend to be absorbed by the much larger differential between the import and domestic prices.

sented loss subsidies to export organizations.[8] The deduced figure of a little less than 11.1 billion rubles as the measure of subsidies to export organizations is unfortunately not substantiated with any precision by direct computation. Total Soviet exports amounted to 14.6 billion rubles in 1956. If domestic prices were from 2 to 2½ times export unit values, as we have estimated, then loss-subsidies should have amounted roughly to from 15 to 20 billion rubles. This is a somewhat larger figure than the estimate from budget data. However, in light of the general crudity of the estimating techniques used, the two figures may be considered to be of the same order of magnitude. Our estimate of the ratio of domestic to export prices was based on a sample of about one-third by value of total exports. If the discrepancy derives from an unrepresentative sample, the implication is that the ratio of domestic price to unit value of the remaining exports is probably somewhat less than 2.

Attempts to detect the amount of the customs receipts item in the budget are less successful. The only direct clue is provided by budgetary data for 1958. Two different breakdowns of planned budgetary receipts have been presented:

	A	B
Turnover tax	301.5	301.5
Profits tax	130.3	130.3
Income tax on co-ops and collectives	15.6	15.6
Receipts from population	72.7	72.7
Social insurance	32.1	
Income from forests	2.1	122.8
Income from other enterprises	(1)	
Income from foreign trade organizations	(1)	
Income from machine tractor stations	11.9	(1)
Unspecified residual (not listed)	76.8	0
Total	643.0	643.0

[1] Not listed.

Sources: A from [4, pp. 65–66]. B from [17].

From these two sources it can be deduced that income from foreign trade organizations and from "other enterprises" together were expected to return 76.8 billion rubles to the budget. There seems to be no way, unfortunately, of disentangling the two items. Since the ratio of domestic price to unit value is somewhat higher for imports than exports,[9] one would expect income from foreign trade organizations to amount to from 20 to 30 bilion rubles. Satisfactory reconciliation of these figures will not be possible until additional information is discovered or published. It should be noted that the budget report from which the B estimates were taken is the first to my knowledge in the past 10 years to contain any mention of receipts from foreign trade operations.

4. *Soviet international price policy and the foreign trade accounts*

Anyone engaged in a study of Soviet foreign trade sooner or later discovers that different Soviet sources often give quite widely diver-

[8] I have not been able to ascertain whether any part of Soviet loans to other nations is reflected in the budget and, if so, whether it would be reflected in the above-mentioned category or in miscellaneous expenditures. The same problem exists with respect to interest on and repayments of foreign loans.

[9] Imports were roughly 2.5–3.

gent figures for the exports and imports of any given year. For example, Soviet literature provides the following estimates of total Soviet trade in 1929:

[Million rubles]

	Exports (million rubles)	Imports (million rubles)	Date of publication of source
A	924	881	1933
B	4,046	3,857	1939
C	3,219	3,069	1957

In working with Soviet foreign trade data, it is extremely important to make sure one is using a consistent set of statistics and to be able to reconcile the apparent inconsistencies noted above.

The apparent inconsistencies result from the Soviet practice of revaluing all previous trade statistics every time the value of the ruble is changed in terms of foreign currencies and revaluing by the full amount of change in exchange rate. Thus, the A and B estimates differ by a factor of 4.38, the amount of the devaluation of April 1936. The B estimate is converted into the C figure by first increasing the B figure to account for the small devaluation of 1937 (divide by 0.947) and then decreasing it to allow for the 32½ percent revaluation of March 1950 (divide by 1.325). For some unstated reason, probably its small magnitude, the 1937 devaluation was not used until 1950 to adjust the value of earlier year trade returns.

This Soviet practice is quite unique and, to my knowledge, is not used by any other nation. An example may clarify the issues. Typically, when a nation devalues, the prices in foreign currency of its exports and imports at first fall whereas the prices in domestic currency remain the same.[10] Therefore, the unit value in domestic currency of the devaluing nation's trade may remain roughly the same before and after devaluation. Thus, suppose the United States were selling automobiles to Great Britain for $2,800 or £1,000 and then devalued from $2.80 to $5.60 to £1. After devaluation, the price to Great Britain in dollars would still be $2,800 though the price in sterling would have fallen to £500.

The Soviets rationalize their practice on the grounds that their foreign trade prices are fixed in accordance with world prices and, therefore (by implication) when their exchange rate changes, the world price remains the same but the value in domestic currency changes. This causes a sharp discontinuity in the unit values at which trade in domestic currency is valued (if there has been a currency revaluation). This in turn justifies their practice of revaluing earlier trade returns for comparability. Suppose, for example, the Soviets are exporting Moskvich automobiles to the United States for $1,200 or 4,800 rubles. Suppose they devalue to 8 rubles=$1. By their practice, the foreign currency price of a Moskvich remains $1,200 but increases in domestic currency, to 9,600 rubles. The Soviet trade returns (in rubles) would show, in this case, a doubling

[10] Actually, prices in domestic currency may rise because of the increased demand at the lower price in foreign currency; and for highly competitive products, the price in foreign currency is likely to remain unchanged.

of the value of trade. To avoid this purely statistical illusion of an increase in the volume of trade, all trade conducted during the previous year is revalued upward for comparability with trade returns at the new exchange rate.

No attempt will be made here to evaluate the Soviet statistical practice just described. It seems clear, however, that since Soviet foreign trade prices have no reference in the domestic price-cost structure (if they did, the practice would not be necessary in the first place) changing the value of trade for comparability in world prices is certainly a step toward obtaining a consistent series of the value of Soviet trade for intertemporal comparisons.[11] Users of such series should be careful to employ them only for comparisons of Soviet trade over time and then, for many purposes, they should not be used without further adjustment. They should not be used to compare Soviet trade in some predevaluation period with the trade data of other nations in that period. Neither the revised nor the original trade figures can be used, of course, in Soviet national income accounts without an adjustment for the gap, indicated earlier, between foreign trade unit values and domestic costs and prices. Finally, it is essential to check carefully the price basis underlying any series of trade data published recently by the Soviets. In the past few years, different sources have contained historical figures some in terms of a ruble worth $0.25 and others at the earlier rates which prevailed in the years to which the figures pertain.[12]

Soviet commodity trade

[Millions of 1950 rubles]

	Exports	Imports	Balance		Exports	Imports	Balance
1913	5,298	4,792	506	1930	3,612	3,690	−78
1917	1,698	8,453	−6,755	1931	2,827	3,851	−1,024
1918	28	367	−339	1932	2,004	2,454	−450
1919	0	11	−11	1933	1,727	1,214	513
1920	5	100	−95	1934	1,458	810	648
1921	70	734	−664	1935	1,281	841	440
1922	284	940	−656	1936	1,082	1,077	5
1923	760	499	261	1937	1,312	1,016	296
1924	1,175	906	269	1938	1,021	1,090	−69
1925	2,120	2,881	−761	1946	2,600	3,100	−500
1926	2,525	2,440	125	1950	7,200	5,800	1,400
1927	2,600	2,642	−42	1955	13,874	12,242	1,632
1928	2,800	3,322	−522	1956	14,446	14,452	−6
1929	3,219	3,069	150	1957	17,526	15,751	1,775

Sources:

1917: "Dostizhenila Sovetskoi vlasti za 40 let v tsifrakh," Moscow 1957, p. 31 (converted).

1913, 1929–38: V. S. Alkhiiov and others, "Vneshniaia torgovlia S.S.S.R. s kapitalisticheskimi stranami," Moscow 1957, pp. 7–11.

1918–1928: N. Liubimov and A. M. Smirnov, "Vneshniaia torgovlia S.S.S.R.," Moscow 1954, pp. 147, 165, 177.

1946, 1950: Vneshniaia torgovlia (monthly), 1958: 4, p. 21.

1955: "Vneshniaia torgovlia S.S.S.R. za 1956 god," 1958.

1956–57: "Vneshniaia torgovlia S.S.S.R. za 1957 god," Moscow, 1958.

5. *Foreign trade and internal financial stability*

As a planned economy, the Soviet economy is much more insulated from the impact of foreign trade than are the economies of other nations. It is convenient to distinguish here between three effects of

[11] For many purposes it would have been more useful to have revalued the trade in terms of domestic prices in those years in which domestic prices were "rational."

[12] It is worth noting that from the 1917 revolution until October 1, 1924, probably because of the hyperinflation which gripped the nation's economy, all trade data published were in 1913 prices and in terms of $0.5146 ruble [3, p. 235].

foreign trade on an economy: (*a*) The comparative advantage effect, (*b*) the employment effect, and (*c*) the financial effect (with which we are here mainly concerned).

(*a*) By the comparative advantage effect is simply meant that nations achieve a higher level of productivity and output by specializing in those activities to which their skills, resources, climate, and factor proportions are best suited and then exchanging some of the domestically produced output for goods which the country cannot produce or can produce only at high cost relative to other nations. Let it suffice to say here that both planned and unplanned economies benefit equally from the comparative advantage effects of trade. These effects constitute, of course, the basic rationale of international trade. Perhaps the one difference here between the Soviet Union and most Western nations has been that the Soviets have preferred in the past, for political and strategic reasons, to be as self-sufficient as possible and to forgo these benefits of trade. Since World War II, this policy has been reversed in trade with other Soviet bloc nations and shows signs of being relaxed slightly in trade with the West and with underdeveloped nations.

(*b*) By the employment effect of foreign trade we refer to the fact that (1) an increase in exports tends to increase the level of employment; and (2) an increase in imports, to the extent that the imports substitute for domestically produced goods, tends to reduce the level [13] of employment. The importance of this effect is dramatically attested to by the so-called beggar thy neighbor policies of the 1930's and the international rejection of such policies today. Most nations are now committed to maintaining a high level of employment through domestic fiscal and monetary policies and not by "beggaring their neighbors."

Though foreign trade has an important impact on the level of employment in Western nations, it has little or no impact on the level of Soviet employment. This is because the Soviets plan for full employment of their labor resources taking into account the foreign trade sector. In theory, should the plan schedule a rise in imports which replace domestically produced products, it should also schedule new jobs for the workers rendered unemployed by the increment to imports; should the plan call for a decline in exports, it should also call for a shift of workers from export industries to those producing for domestic consumption.[14] There is one exception to our proposition regarding the impact of trade on Soviet employment: if Soviet plans for imports of raw materials and other intermediate products are not fulfilled, and if the Soviets do not have adequate reserves on hand, then bottlenecks may develop, factories may have to reduce their activities, and labor will be temporarily underemployed or unemployed.

(*c*) By the financial effect [15] is meant the potentially inflationary or deflationary effect of foreign trade on the economy. The financial effect is virtually indistinguishable from the employment effect in the case of free enterprise economies. Thus, at full employment, an increase in exports relative to imports will create inflationary pressures

[13] The comparative advantage effect works through altering the "distribution" as opposed to the "level" of employment.

[14] This may require no actual physical shift, of course, since many domestic industries produce exportables.

[15] The pioneering study of this question is that of Edward Ames [1]. The analysis here differs from Ames' in several respects. A more elaborate analysis of this problem is in preparation.

and a decrease, deflationary pressures. In the Soviet economy, the financial and employment effects are quite distinct. This is because the monetary flows in the economy are not allowed to influence the employment or allocation of resources in any "substantial" way. As we have already indicated, the Soviets plan for full employment. Full employment has a very high priority in their system and they do not allow financial factors to stand long in the way of achieving this objective. While deflation has never been a problem the Soviets have had to face, they have been perennially plagued by inflationary pressures [6, ch. 2; 7]. Inflation, though it has not affected the overt level of employment directly, has had many undesirable side effects on the economy such as encouraging speculative activities; reducing work incentives; requiring, at times, rationing; and providing obstacles to planning [6, ch. 1]. The major purpose of their tax system is, in fact, the elimination of this excess purchasing power in the hands of the population and the prevention, thereby, of these undesirable side effects of inflation.[16]

The financial effect on the Soviet economy of foreign trade, while in fact not very important, in theory depends on the following factors: (i) The relative amounts of exports and imports; (ii) the relative proportions of consumers' and producers' goods in both exports and imports; (iii) the size of the sales taxes on exportables and on import substitutes, respectively; (iv) the extent of the comparative advantage effect, and related to this, the relative labor costs of producing exports and import substitutes.

(i) If exports exceed imports, whether because of long-term credits or due to a short-term imbalance, the effect is inflationary, all other things being equal. The reverse is true if imports exceed exports.

(ii) The impact of inflationary pressures is quite different in the consumers' goods and producers' goods markets, respectively. We need not be concerned here with the latter since the major interenterprise transactions are all carefully regulated by the state and the purchase and sale of important producers' goods are accomplished by direction allocation. Moreover, the state bank has been very successful, in the postwar period, in preventing enterprises from converting excess deposits into cash for the bidding up of wage rates, a practice very prevalent in the 1930's [6, ch. 2; 7]. The impact of inflationary pressures in consumers' goods markets has already been indicated. For financial stability in the consumers' goods markets, then, total exports and imports are not the crucial variables but rather the relationship of exports and imports of consumers' goods. In other words, the volume of exports might be double that of imports but if the exports consist entirely of producers' goods and the imports, of consumers' goods, the net impact on the consumers' goods markets will be deflationary. On the other hand, even if imports exceed exports, the net impact will be inflationary if the volume of consumers' goods exports exceeds the volume of consumers' goods imports.

[16] While taxes in the United States also serve these functions, their major purpose, when viewed in light of limitations on increasing the national debt, may be considered the procurement of resources for Government use. In the Soviet economy, resources for Government use are allocated directly and the taxes simply serve to keep the monetary flows in line with planned resource flows and thereby prevent the development of inflationary side effects just mentioned.

(iii) Consumers' goods sold in the Soviet Union almost all bear a sales tax which averages about 50 percent of price (ie., a 100-percent markup) and which varies from 1 percent on some commodities to as much as 80 percent of price on others. The export of a consumer's goods means the loss of sales tax revenue whereas the import of a consumer's goods adds sales tax revenue since imported consumers' goods are sold at the same price as equivalent domestically produced commodities. Therefore, foreign trade will be more (less) inflationary the larger (smaller) the foregone sales tax (markup) on exported goods and the smaller (larger) the markup on imported goods.

(iv) With the exception of small transfer payments, demand for consumers' goods in the Soviet economy derives exclusively from labor income (i.e., wages, salaries, income of peasants). Therefore, the inflationary effect of foreign trade will be affected by the labor cost of producing exports (both producers' and consumers' goods) compared with the labor cost of an equivalent value of import substitutes. In other words, if there have been "real" gains from trade so that the output per person available for consumption (by state and household) after trade is greater than before trade, the volume of goods will have increased relative to the size of household incomes and foreign trade will have had, on this account, a deflationary impact.

A significant fact to be noted, here, is that in discussing the financial impact of foreign trade on the economy, we have ignored both the par value of the exchange rate and the export and import unit values at which Soviet goods exchange in the international market. The reason for this is related to the fact that we are concerned here only with inflation in the consumers' goods markets. The relationship between domestic prices and foreign trade unit values arrived at via the official ruble exchange rate has important implications for enterprise accounts as we indicated in section 3, but very little for the goods-money relationship in the consumers' goods markets. As we have already indicated, since most aspects of the interenterprise markets are thoroughly administered and inflation in the labor market is under control, the inflationary effects of foreign trade in this sector can safely be ignored.

The final question to be considered is: If foreign trade has a net inflationary or deflationary effect in the consumers' goods market, is this effect likely to be very significant? My guess is that it is of no great significance for the following reasons: First, Soviet foreign trade amounts to no more than about 3 percent of gross national product and foreign trade in consumers' goods amounts to an even smaller percentage of the value of consumers' goods sold domestically. Since Soviet trade is usually close to being balanced, the net effect is smaller still.[17] Second, to the extent that exports and imports of consumers' goods are planned in advance, their net inflationary or deflationary impact on the domestic economy can be and probably is offset by adjusting other variables in the financial picture. This is not meant to imply that the Soviets have perfected the science of financial planning. Far from it. They have never succeeded in achieving an

[17] No attempt has been made to estimate the balance of consumers' goods in foreign trade or the relative tax rates on exports and imports of consumers' goods.

equilibrium between the money and commodity flows in their consumers' goods markets with the possible exception of 1949 [7]. It seems doubtful, however, that foreign trade has affected this problem significantly.

6. *Soviet gold policy*

The Soviets are believed to be the second largest gold producer in the world, after the Union of South Africa. The Soviets have not, however, published figures regarding either their gold stock or gold production for at least three decades. Estimates of Soviet gold production which have appeared in the League of Nations Statistical Yearbooks and in the annual reports of the Director of the U.S. Mint agree that (1) gold production fluctuated widely in the 1920's but was substantially less than 1 million fine ounces a year, and (2) increased from about 1.5 million fine ounces in 1930 to over 5 million ounces annually from 1936 to 1939. At $35 an ounce, the Soviets must have been producing close to $200 million worth of gold annually in the late thirties. Since Soviet trade deficits were small and recorded gold exports amounted to less than $700 million they may have accumulated as much as $2 billion worth of gold before World War II. This would have been an impressive stock at prewar prices.

Postwar output and stock of gold estimates are probably less firm than prewar. In its annual Bullion Review for 1955, Samuel Montague & Co. estimated that the Soviets are now producing 10 million ounces, or $350 million worth of gold a year. On the basis of this production estimate, they concluded that the Soviet gold stock is currently (1955) in the neighborhood of 200 million ounces or $7 billion.

While none of the above figures can be considered more than informed estimates, there is no question about the fact that the Soviets mine gold on a large scale and that they are one of the largest producers of gold in the world. They have admitted this much.

Why do they devote so much in the way of resources to the mining of gold? While, legally, the state bank is required to cover its note issue with 25 percent backing in gold, this probably has no significance whatsoever for Soviet practice today. Soviet economists stress that it is not gold which gives their paper currency its real value but rather the goods in circulation which the money can buy. The basic reason for mining gold, they say (postwar), is for use as a foreign exchange reserve. The gold can be used to meet planned deficits in the balance of payments; to make purchases abroad to correct maladjustments in the plan which arise during a planning period; to make payments, under bilateral clearing agreements, when indebtedness exceeds a given amount; and to extend loans to friendly nations. The existence of a reserve of gold thus gives the Soviets considerable flexibility for adjustment in foreign trade and domestic economic matters. There is no question about Soviet use of gold in the postwar period for just the reasons mentioned above. It is well known, for example, that they have made gold loans to a number of nations (e.g., Poland, Czechoslovakia, East Germany); that they have used gold to purchase sterling because of a persistent trade deficit with sterling area countries; and that gold was used to help finance the large unplanned imports of consumers' goods in 1953–54 promised by Malenkov after Stalin's death, and so forth. Gold sales, mainly through Switzer-

land and London, to finance these transactions have roughly amounted to:

[In millions]

	Ounces	Dollars
1953	4.3	150
1955	2.0	70
1956	4.3	151
1957	7.5	263
1958	6.0	210

Source: 10, 13.

In addition, it has been reported that the Soviets have sold abroad substantial amounts of other precious metals, notably silver and platinum.

There is some question as to whether the mining of gold is an economically profitable operation for the Soviets in terms of the imports which the gold can be used to buy. In the thirties, there is little doubt but that most of the gold was mined by forced labor. Given the institution of forced labor, and given the low world prices of goods, the mining of gold may well have been "profitable." There seems to be considerable doubt concerning its profitability today, however, what with high world commodity prices and, since the reduction in forced labor, probably a shift to use of free labor in many of the mines. Furthermore, it is generally believed that conditions for gold production in Russia are, for the most part, very high cost [5, p. 37]. It might make sense, from an economic comparative advantage point of view, for the Soviets to shift resources out of gold and into other exportables. A labor day in machine tools, for example, might earn more foreign exchange at present than a labor day in the gold mines In any event, recognition of the relatively low purchasing power of gold has led no less a luminary than Deputy Premier Mikoyan to accuse the United States of exacting a tribute from the gold-producing nations and to call for an increase in the price of gold [14].

7. *Payments agreement* [4, pp. 306 ff; 11, pp. 93 ff; 16, ch. 6; 20]

Before 1929, most Soviet trade was conducted on a multilateral basis. The worldwide financial crisis of that period started them on the path of bilateral agreements with the use of clearing accounts; and this form of payment agreement still characterizes most of their financial relationships with other nations today.

The Soviets argue that their use of clearing accounts in trade with capitalist nations is a result of the limitations on convertibility of many western currencies and of the trade controls used by capitalist nations; but that the use of clearing agreements among nations of the socialist camp reflects not inconvertibility or trade controls, but rather the planned nature of intrabloc trade and the long-term agreements on trade among bloc nations. Actually, the ruble is, as we have seen, the most inconvertible of currencies being greatly overvalued at its nominal exchange rate of 4 rubles to $1. For this reason the unit of account in Soviet trade with a western nation is always the currency of that nation or the currency of some other western nation, usually the United States or Great Britain. (Since 1950, trade among bloc nations has been in tems of the ruble.) The western currency, rather

than the ruble, is also used to settle persistent trade inbalances and usually these currencies, even where not fully convertible, are guaranteed convertibility in trade with the U.S.S.R. It is hardly fair, therefore, for the Soviets to place the blame for bilateralism on the currencies of nonbloc nations. Furthermore, with respect to the planned nature of Soviet bloc trade, it has been shown that bloc bilateral trade (*a*) has been subject to wider fluctuations than unplanned trade among nonbloc nations and (b) has usually been wide of targets [20].

The clearing account usually encompasses all commodity trade but with many nations provides also for settlement of expenses on invisible account. Since trade between a pair of nations will never balance precisely at all times, even though bilateral balance may be achieved over time, the clearing accounts agreements typically provide either implicitly or explicitly for swing credits. These "technical" credits, as the Soviets call them, allow for a certain percentage of imbalance without an interest charge. The imbalance allowed varies from 5 to 20 percent of the value of trade in each direction, much less than is usual among capitalist nations. The absolute amount of "technical" credit allowed will depend on the value of trade, seasonal character of trade, and other such variables. Should the trade imbalance exceed the limit set, then the usual provision is that either party can ask for payment of the excess in gold or convertible currency. If the trade agreement should be concluded with an imbalance, then the total amount of the imbalance is usually settled in gold or convertible currency. The payments agreements with nonbloc nations usually contain a clause protecting the Soviets against losses from devaluation should they happen to have an active balance with a nation which devalues.

It should be noted that while in most payments agreements with Western nations, the clearing account technique is employed, this is not always the case. In some instances, the agreements provide simply for payment in convertible currencies; in others, the agreement is in strictly barter terms though, usually, with some provision for payment in convertible currency or gold should one or the other side fail to deliver as promised. It should also be noted that in a few instances in payments agreements with Western nations, provision has been made for settlement of bilateral imbalance in terms of mutual trade with a third nation. There are also a few instances of trilateral settlement in intrabloc trade. Multilateral settlement of imbalances based on the ruble seems to be a goal of the Soviets in intrabloc trade. In June 1957 the members of the bloc actually signed an agreement for multilateral settlement as a supplement to the bilateral agreements now in force. There is some question as to whether this agreement has ever been put into operation. In fact, there is considerable doubt that any system of multilateral settlement could be implemented in terms of Soviet bloc currencies so long as they each maintain exchange rates which are not mutually realistic in terms of their respective cost-price structures.

APPENDIX

The most recent complete balances of payment data released by the Soviets are those for 1935 and 1936 and published by the League of Nations. These are presented below (in 1936 rubles):

Balance of payments of the U.S.S.R. for 1935 and 1936

[In million rubles]

CURRENT ITEMS

Receipts	1935	1936	Payments	1935	1936
1. Receipts from sale of export goods (f.o.b. prices)	1,800	1,497	1. Cash payments for imports including overhead charges (c.i.f. prices)	860	1,328
2. Income from marine freightage (balance)	48	72	2. Expenses on technical servicing and assembly	23	23
3. Receipts from harbor dues and for the servicing of ships (balance)	11	2	3. Excess of State expenditures over State receipts abroad	57	55
4. Other receipts from transport (balance)	12	16	4. Interest on loans and credits (balance)	89	44
5. Receipts from insurance operations (balance)	6	2	5. Other expenses		62
6. Receipts from noncommercial transfers (balance)	62	7			
7. Receipts from the tourist trade and money spent by foreigners (balance)	29	35			
8. Other receipts	165	32			
9. Sale of gold	52				
Total (1–9)	2,185	1,663	Total (1–5)	1,029	1,512
			Excess of receipts over payments on current items	1,156	151

MOVEMENT OF CREDITS AND PROPERTY HELD ABROAD

Claims	1935	1936	Counterclaims	1935	1936
1. Repatriation of property held abroad (balance)		71	1. Repayment of State and concessionary loans		46
2. Receipts from State loans sold abroad	8		2. Repayment of import credits granted by foreign firms	694	354
3. Receipts from financial credits		242	3. Reduction of indebtedness made up of short term export and bank credits	319	32
Inflow of credits and property held abroad (1–3), total	8	313	Outflow of credits and property held abroad (1–3), total	1,013	432
Excess of outflow over inflow in the movement of credits and property abroad	1,005	119	Net increase of the Soviet banks' foreign currency accounts held abroad	151	32

Source: Alexander M. Baykov, "Soviet Foreign Trade," Princeton 1946, p. 39.

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SINO-SOVIET ECONOMIC ACTIVITIES IN LESS DEVELOPED COUNTRIES

(By Henry G. Aubrey, Project on the Economics of Competitive Coexistence, National Planning Association, Washington, D.C.)

Various U.S. Government publications have previously dealt with my present topic.[1] They have provided the basic statistics and much detail about the Communist moves. No good purpose would therefore be served if I were to summarize what has been said there already. Since the theme of the present study is a comparison of the American and Sino-Soviet economies, it may be more useful if my contribution would center on comparison, interpretation and analysis. Among others, it draws heavily on studies undertaken by the project on the economics of competitive coexistence of the National Planning Association under my direction;[2] but the views expressed in this paper are my own and do not commit anyone but myself.

1. COMPARATIVE EFFECTIVENESS: THE TWO IMPACT EFFECTS

Any comparison must begin with quantities. Hence, in discussing aid and trade in turn, magnitudes will be mentioned. They will make it evident that Soviet foreign economic activities, while growing, lag far behind the Western effort. But an apparent paradox emerges at this point. Although it can be seen that Communist aid and trade are relatively small, they are generally considered an alarming threat to the Western position which by all counts is so much older and therefore ought to be so much more firmly established. This implies that the effectiveness of the bloc's activities is presumed to be high while the West's own aid programs are perennially confronted by doubts about their achievements. It would seem to follow that, dollar for dollar or by any other measure, Soviet activities are deemed to be more effectual. Why should that be so, and is it due to what the Sino-Soviet bloc does, or how it does it, or to the political climate surrounding its effort? Our discussion therefore turns from quantitative to qualitative factors. In particular, differences in techniques and institutions, psychological factors and even imponderables, call for attention. In fact, the problem can be reduced to one fundamental question. If the United States

[1] Department of State, "The Sino-Soviet Economic Offensive in the Less Developed Areas," Publication 6632, May 1958; "The Communist Economic Threat," Publication 6777, March 1959; Mutual Defense Assistance Control Act of 1951, "Twelfth Report to Congress," and earlier reports; Department of Commerce, "Exports (Imports) of Free World Countries to (from) Soviet Bloc, Value Series," and "Summary of Country-by-Commodity Series"; and testimony by the Secretary and Under Secretary of State and by the Director of the Central Intelligence Agency before the Congress.

[2] Particularly the three studies with the collective title "Communist Economic Strategy," namely, "The Role of East-Central Europe," by Jan Wszelaki; "The Rise of Mainland China," by A. Doak Barnett; and "Soviet Growth and Capabilities," by Alec Nove; also "Japan, China, and the West," by H. Michael Sapir, and "East and West in India's Development," by Wilfred Malenbaum; all published by the National Planning Association, Washington 1959. A comprehensive volume of analysis on the problems of coexistence is now being prepared by myself. See also Henry G. Aubrey, "Sino-Soviet Aid to South and Southeast Asia," World Politics, October 1959, and "Soviet Trade Price Stability, and Economic Growth," Kyklos, vol. XII (1959) Fasc. 3.

and the Communist bloc appear to do the same thing, could it be that it is not the same, and why?

It has been said that the entry of the Communist bloc into the aid field represents an acknowledgment of the effectiveness of Western programs. Undoubtedly the Communists did not want the West to perpetuate a privileged position it had held so far only by default on the bloc's part. But for every similarity one can detect differences which can be interpreted as deliberate contrasts to the West's handling of aid and trade. This may well be due to different policy aims. But as I am not sufficiently confident of our ability to divine the price intent behind individual Soviet moves, in contrast to a popular line of thought, I prefer to tackle the problem from the other end: the impact upon the recipient countries. For, surely, the effectiveness of a policy instrument can best be evaluated by what it achieves at the point toward which it has been directed.

Consciously or not, the Communists appear to realize that there are not one but two related impact effects which operate on distinct levels of receptiveness. The first is socioeconomic and tangible: the changes which, say, aid achieves in the economic and social fabric of the recipient country. This effect usually takes time to take hold; and while its impact may go deep, the change is gradual and seems unspectacular and therefore unimpressive to the average observer. In fact, for this very reason, there can arise differences between the donor and the recipient country regarding the anticipation of the effects or in its evaluation after the event.

At this point, the first impact effect is linked with the second: the impression aid makes on the minds of the recipients, governments as well as the people. This a psychological-political factor of the utmost importance, since undoubtedly the creation of a receptive and sympathetic climate is one measure of the efficiency of any policy instrument. In this respect, then, it may well be more consequential how aid is given, and for which presumed reasons, than what and how much. Note the emphasis on the term "presumed," because the effective ingredient need not be the true intent but the image evoked in the recipients' minds.

As we now proceed to the discussion of aid and trade, it will become evident that the Communists appear very finely attuned to the second impact effect, while the United States has been resting its case on what, in its view, will eventually be best for the recipient countries. From the short-run political angle it is easy to see that more may be gained psychologically by banking on the immediate benefits of the second effect than by neglecting it in the hope—and there can be no certainty—of being right over the long term. But by the same token, who is right eventually is apt to win the contest, provided he has not lost one battle too many in the meantime—and it is hard to tell in advance which of them would turn out to have been Waterloo.

2. SINO-SOVIET AID

Comparative magnitudes

In the period from mid-1954 to mid-1959, bloc assistance agreements totaled around $2.7 billion (see table 1). About three-quarters of this amount was economic aid and the rest military. Of the total the U.S.S.R. provided about 70 percent and Communist China not more

than about 4 percent. In the same period the United States provided to the same group of 20 countries $5.3 billion of economic assistance alone of which about $1.2 billion were defense support. Inclusion of countries to which the bloc has not offered any aid would approximately double the American 5-year assistance total.

TABLE 1.—*Communist-bloc and U.S. Government assistance to selected underdeveloped countries, July 1, 1954, to June 30, 1959*

[Millions of dollars]

	Communist-bloc total assistance			U.S. economic [2] assistance [3]
	Total	Military	Economic [1]	
Middle East and Africa	1,427	580	849	1,197
Egypt	658	315	343	140
Syria	304	128	177	2
Ethiopia [4]	124	----	124	56
Guinea	1	----	1	2
Iran	6	----	6	353
Iraq	257	120	138	15
Turkey	17	----	17	623
Yemen	60	17	43	7
South and southeast Asia	1,102	195	907	2,495
Afghanistan [5]	245	32	213	85
Burma	17	----	17	71
Cambodia	34	----	34	173
Ceylon	58	----	58	54
India [6]	323	----	323	1,166
Indonesia	402	163	239	189
Nepal	20	----	20	19
Pakistan	3	----	3	738
Europe	114	----	114	655
Iceland	5	----	5	25
Yugoslavia [7]	110	----	110	630
Latin America	106	----	106	962
Argentina	104	----	104	345
Brazil	2	----	2	617
Total	2,748	773	1,975	5,309

[1] Including about $167 million in grant aid to Afghanistan, Cambodia, Ceylon, Egypt, Guinea, India, Nepal, Pakistan, and Yemen.
[2] Data on U.S. military assistance to individual countries are classified and therefore omitted from the table.
[3] Including the following: ICA obligations; Development Loan Fund commitments announced through June 30, 1959; Public Law 480 assistance and agricultural surplus aid under the Mutual Security Act (under agricultural sales agreements, figures represent uses made of local currency proceeds); development loans by Export-Import Bank.
[4] Including a credit agreement for $122 million concluded early in July 1959.
[5] Includes a $3.5 million credit reported during the first half of 1954.
[6] Not including a credit for $378 million promised in July 1959 for the 3d 5-year plan which is not slated to begin until 1961.
[7] Not including $354 million in credits extended in 1956 and subsequently either canceled or allowed to expire.

NOTE.—Details may not add to totals because of rounding.
Sources: U.S. Department of State and ICA.

Actually, this comparison which seems already so favorable to the West is nonetheless biased in favor of the bloc. Under the Soviet system long-term, "bulk" credits are negotiated. They are in effect credit lines, or ceilings under which agreements for individual projects are thereafter negotiated. This takes much time and there may be long delays in acceptance or ratification (about 2 years in the case of Indonesia); and the total is expected to be expended over a period of years (7 years in the case of Syria). This is in striking contrast to the American system of annual authorization and appropriation

under which obligations usually follow promptly since funds are chronically short, and disbursements also lag much less.

Moreover, more time passes until the bloc has manufactured and delivered the aid goods. If large projects, such as a steel mill, are involved it may take years to complete. Thus, at the end of 1958 it was believed that not more than one third of the credits had actually been drawn; and an earlier attempt to calculate the rate of disbursement project by project [3] suggests that it was no higher than $160 to $200 million in 1957, less than one tenth of 1 percent of national income though it probably has been rising somewhat since then.

These are, clearly, not large amounts and the actual burden is even smaller since most of bloc aid consists of loans and value will be received in the form of imports in repayment. In some instances, such as Burmese rice and Egyptian cotton, the shipments to the bloc were even received in advance and the bloc in effect enjoyed a credit from these less developed countries.

In a proper East-West comparison non-American Western assistance ought to be also included. In 1957–58 the annual rate of total non-Communist aid, bilateral and multilateral, net of repayment, was estimated by the United Nations as close to $3 billion to which the United States contributed about one third.[4] On grounds of much higher international loan activity a later period would probably show an even higher rate of Western assistance. This makes the discrepancy between Western and Communist aid still wider.

Finally, one may want to include private loans and investments in the total Western contribution of capital. A reasonable, though admittedly rough guess might put the total average annual flow of long-term capital to the less developed areas at about $2 billion [5] over a recent 4 year period. This does not even make full allowance for medium and short-terms credits by suppliers and financial institutions. In all its various forms, Western investments, bilateral and multilateral assistance capital probably exceeded $5 billion a year and will probably increase as multilateral contributions and European exports grow.

This kind of calculation, however, assumes that the impact effect of private investment and of government capital, such as the Communist bloc exclusively supplies, is the same. In the light of the "two-impact-effect" test outlined before, it becomes evident that this is not necessarily so. In the strictly economic sense, any capital inflow increases the supply of inevitable resources and to that extent the first impact effect of private investment ought to be the same as that of public loans, although the servicing of loans or transfers of profits may involve different balance of payment burdens.

But the second impact effect is not the same at all since many recipients take a dissimilar view of a plant the Russians build and leave behind when they go home, and one remaining under the control of

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[3] Joseph S. Berliner, "Soviet Economic Aid" (New York, 1958), pp. 41 ff.

[4] Computed from United Nations, "International Economic Assistance to the Less Developed Countries" (Document E/3255, May 8, 1959, mimeographed), table 19.

[5] United Nations, "International Flow of Private Capital, 1956–58" (Document E/3249, mimeographed), pp. 9 and 21. Due to shortcomings of balance of payments statistics the actual amount may be larger, as some of the components are net of repayments. Moreover, reinvested earnings abroad are largely excluded and their inclusion would greatly raise the investment total, even though no new flows of funds are involved. See Emilio G. Collado and Jack F. Bennett, "Private Investment and Economic Development," Foreign Affairs, July 1957.

foreign investors for the indefinite future. Thus, the welcome extended to both varieties is often very different; and it is well to remember that the second impact effect is formed in the recipients' mind and by his own lights, no matter how misguided in our own view.

Technical assistance

Along with the credit program, the Sino-Soviet bloc also ventured forth into technical assistance on a rising scale.

The bloc has an estimated 4,675 technicians engaged in economic development work abroad for 1 month or more during the first half of 1959. This compares with over 6,000 American technical personnel abroad as of June 30, 1959. Of course, American technical cooperation is of much older standing, going back to the time before World War II, but then the number of bloc technicians abroad has lately been increasing at twice the American rate. The bloc also reportedly trained about 3,000 foreign technicians and students over the last several years, while the United States financed the training of nearly 9,000 nationals of less developed areas under the fiscal 1959 program.[6]

If the bilateral programs of other Western countries were included, the numbers would be greatly increased, not to mention the important transfer of skills by business that goes along with foreign investment; but statistics in this respect are unfortunately not available. The expanded technical assistance program of the United Nations alone has sent about 8,000 experts abroad and financed the foreign training of about 14,000 students and officials in the first decade of its existence; and its work continues to grow and is being further expanded by the special fund established in 1958. The contribution of the Sino-Soviet bloc to the United Nations programs is small, both in terms of men and of funds (which are, moreover, tied to bloc goods and services to the extent of better than 75 percent). The bloc contributed only 23 experts in 1958, much less than many less developed countries; for instance, India supplied 146 and even the United Arab Republic 56.[7]

It may be useful to point to some systematic differences between Soviet and American technical assistance. Western services are usually supplied within a framework of individual projects, many of them small and aimed at very specific training results; this aid is typically supplied free in a setting of mutual cooperation in which the recipient takes care of the local cost. Soviet technical assistance is more frequently part of a larger package, consisting of loans, development goods and bilateral trade; the services of experts are not free, but are charged against the loan, if not accounted for separately, and these charges are quite high, sometimes higher than the West's.

Reports on the qualifications of Soviet technicians are mostly favorable though they are not as broadly trained as Western specialists. They seem to behave correctly and the fear that they might be spies or carries of propaganda does not seem to have been borne out. In

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[6] "The Mutual Security Program, Fiscal 1960. A Summary Presentation" (March 1959); and State Department publications previously cited.

[7] United Nations, "Annual Report of the Technical Assistance Board" (Document E/3226, mimeographed), pp. 117 ff; Robert Loring Allen, "United Nations Technical Assistance: Soviet and East European Participation," International Organization, vol. XI, No. 4 (1957), p. 629.

many instances they have rather more language difficulties than their Western counterparts. But in some Middle Eastern regions experts of Turki or Moslem ancestry were used, perhaps in an attempt to capitalize on an affinity of kinship and language. The Russian experts do not appear to fraternize much with the local people. But in building a steel mill in India, along with other steel mills supplied by Great Britain and Germany, some reports stress the good personal relationship of the Russians with the Indians; others mention that the British are getting along best with the the Indians while the Russians have to operate through interpreters and allegedly are not generous with explanations.[8]

For their part some American experts, as is well known, find it difficult to adjust to foreign conditions and so do their wives.[9] Even if too much can be made of such personality difficulties compared with the impeccable but less newsworthy deportment of the vast majority, it is a fact that Americans abroad tend to gather in tight little groups and that their standard of living is conspicuously higher than that of their counterparts in the recipient countries; moreover, they often seem to live better than Soviet experts, especially with regard to lodging, modern amenities, cars, and imported food.

This is not surprising because the bloc experts are used to less elaborate comforts. But the essential feature is the problem of recruitment the West faces. Under the Soviet system the consent to a foreign assignment is not essential, though we need not assume that it has to be forced on the bloc experts; on the contrary, it is quite likely that the general lack of opportunity for foreign travel and the acquisition of foreign goods makes the chance for foreign work rather attractive. By contrast, the difficulties of recruiting in the West qualified personnel for oversea service are well known, even though the growing participation of university personnel under contracts helps to relieve certain specific shortages.[10]

A further distinction between Communist and Western technical assistance is particularly significant for the impact effect of foreign aid. East and West have come to specialize in different fields, in line with their divergent aid philosophy. Americans accord priority to assistance for basic needs like agriculture, health and education, which generally give rise to contacts with large numbers of people, but also calls for an adaptation of skills to very different socioeconomic conditions. Communist bloc experts serve in mineral development, power and transportation, steel mills and other industries which entail the teachiing of a fairly complex technology to relatively small numbers of people. Thus the Western programs operate on the expectation of a gradual impact over a long term while the Soviet experts' work tends to be completed in relatively short time and is directed toward conspicuous projects that are likely to find recognition and appreciation in short order.

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[8] Under Secretary Dillon's testimony before the Committee on Foreign Affairs, House of Representatives, Jan. 29, 1959, p. 37; Paul Wohl in Christian Science Monitor, March 1959; Taya Zinkin in Manchester Guardian Weekly, Feb. 22 and Nov. 27, 1958.

[9] See Harlan Cleveland, "The Pretty Americans," Harper's magazine, March 1959; Gerard J. Mangone, "New Americans in Old Societies," the Antioch Review, winter, 1958.

[10] See "Report of the Special Committee To Study the Foreign Aid Program," p. 21, and Louis J. Kroeger and Associates, "Personnel for the Mutual Security Program," study No. 2, Compilation of Studies and Surveys (85th Cong., 1st sess.), pp. 54, 83, 120; Hugh Tinker, "The Name and Nature of Foreign Aid," International Affairs (January 1959), p. 49.

Comparison of assistance terms

Reverting to capital assistance, it is worth noting that bloc contribution is largely in the form of loans, with the exception of Communist China which entered the field with more grants. Western aid has a much higher component of grants, mostly for the purpose of defense support. The impact-effect test once more reveals a discrepancy on which the Communists have tried to capitalize. Economically, a grant should be preferred by the recipient because no interest and no repayment burden are involved. Psychologically, however, a grant is deemed to involve an obligation—mutual, as in military aid, or imponderable but still implying some dependence, as the Russians never tire of saying. And since the fear of dependence, or the supremacy of a stronger power, or "strings" that exist only in suspicious minds, are woven deeply into the political fabric of former colonial countries, the psychological factor will often outweigh economic rationality.

There is apparently not much difference in the length of loans and repayment terms between Sino-Soviet and Western agreements, except for one feature that gives the former an edge on both impact counts. More bloc loans are repayable in local currency or local products. This has the economic advantage of relieving the borrower of the troublesome problem of finding the foreign exchange for repayment, a grave matter indeed because developing countries are, virtually by definition, chronically short of foreign exchange.

As long as sufficient new capital flows in, the repayment problem need not become too acute; and with increasing frequency the United States had to fund maturities or agree to postponement of payments to forestall defaults. The Development Loan Fund provides for repayment in local currency and so would the proposed International Development Association. But the bloc has used this device more systematically and can well afford to do so in the expectation of acquiring local products in due course. In fact, the bloc has a competitive advantage in this respect because its perennially resource-starved economies can well use most products the less developed areas have to offer; the West, in contrast, buys what it needs anyway through impersonal market channels and often, in order to protect its own domestic production, would not be willing to make an effort to increase imports.

But there is a second, a psychological factor of equal importance. By accepting local products the bloc not only frees primary producing countries from the periodic worry where to dispose of their surplus but, in fact, undertakes to create a new market for them. More important, it makes these countries feel that they are given the tools for their development and the chance to pay for them with the fruits of their economic growth and the products of their soil, so that the repayment promises to be painless and the loans virtually self-liquidating.

Finally, the bloc's interest rates are much lower than the West's. This has clearly both an economic and a psychological-political impact. To give an example, the Soviet loan for the Bhilai steel plant in India calls for 2½ percent interest while the World Bank loans for the expansion of the Tata Iron & Steel Co. carry interest at 4¾ and 6 percent:[11] this clearly adds up to sizable sums over time.

[11] International Bank for Reconstruction and Development, 13th Annual Report, p. 62.

In addition, it provides the Communists with a first-rate propaganda issue because the higher Western interests are described as exploitation. Since suspicion is always rife in formerly dependent areas, where colonialism, imperialism, and exploitation are considered virtually synonymous even by many non-Communists, Soviet contentions undoubtedly fall on willing ears.

More sophisticated observers in the less developed countries probably understand that the interest rate has many market functions to fulfill which it lacks in the Soviet system. It would be difficult for the World Bank to quote lower rates without endangering its link with the international capital markets on which it will depend increasingly. And in the United States, too, lower interest rates would require unusual measures, such as, perhaps, subsidization. But this is only one of a number of institutional problems that the West would face once it decides to match the Communist bloc in its simple, but effective, approach.

The impact of Communist aid

While total aid by the Communist bloc, as mentioned before, is much smaller than the West's, it is also centered in a relatively small number of countries. As first it was largely granted to the new countries in Asia who, it was probably hoped, could thus be kept away from Western influence and encouraged in their neutralist course. Then the nationalist turmoil in the Middle East offered new opportunties for military and economic assistance, partly to spite the West, partly to endorse deep-flowing aspiration with an elaborate show of sympathy and respect. More recently, Africa has received increasing attention and generous offers of aid not restricted to countries where anti-Western feelings were rife, as witnessed by the $122 million credit to Ethiopia by the Soviet Union and Czechoslovakia. There is an alert watch for openings in Latin America whenever a country would become sufficiently hard pressed for imports to accept Soviet aid, as in Argentina and quite recently in Bolivia. And, turning full circle, nearly $400 million have lately been offered to India for its third development plan, more than doubling the aid promises to that country.

Nonetheless, as table 1 shows, bloc aid is highly concentrated. About 90 percent of all economic aid (excluding the promise to India for the third plan which is due to start only in 1961) was allocated to only nine countries granted more than $100 million worth of assistance each. As a result, bloc aid promises are greater than American aid in such neutralist countries as Afghanistan, Indonesia, Iraq and the United Arab Republic. But if all Western sources of capital, including private investment were considered, the picture may change. For instance, total Western loan commitments in Egypt during the last 3 years were reported as twice those from the bloc, largely due to German commitments, and there are indications that total Western credits to Indonesia also exceeded the bloc's.[12]

American aid is much more widely distributed. Where it is concentrated, largely in the form of defense support, it is in areas of importance for the cold war, while the bloc's centers in neutralist areas important in competitive coexistence. This implies a significant

[12] The Washington Post and Times Herald, May 30, 1959; and Frankfurter Allgemeine Zeitung, May 25, 1959.

difference in aid philosophy. It reflects the ingrained American stress of the external threat in contrast with the manifest Communist belief in bringing the less developed countries around by economic and political means. This also explains the bloc's alertness in seizing on situations where anti-Western feelings are encountered and, very importantly, its efforts to demonstrate its endorsement of the national aspirations and the Communists' understanding of the needs of uncommitted nations.

This is expressed by a lavish display of respect and friendship, exchanges of high level visits, and by minute attention to details designed to suggest a contrast with the neglect and condescension of which, in remembrance of the colonial era, the West is all too often suspected. Previously discussed departures of the aid agreement terms from Western practice undoubtedly reinforce the impression of greater affinity on the part of the bloc. A "businesslike" relationship, free of interest in profit and poles apart from so-called Western exploitation, is emphasized and unfavorably compared with "degrading" grants that allegedly create an unwholesome relationship of political dependence.

Thus higher Western interest rates on loans are made out as rapacious. The profit motive is disparaged and American "harping" on a greater role for private capital in economic development and in foreign aid [13] is made to provide evidence that Western aid only serves the interests of busines. These contentions capitalize on a measure of intellectual affinity to Fabian or Marxist tenets that is quite frequent even among non-Communist intellectuals in many less developed countries.

The issue of socialism in competitive coexistence

This point is probably important enough to dwell upon briefly. More often than not the much-discussed Socialist tendencies in the new countries have a fundamentally different meaning from what the word seems to imply to observers who view such leanings too much in Marxist-Leninist terms. By the same token, the image of capitalism in some of these areas is that of a 19th century type which has long vanished in most Western countries; and the relatively enlightened business spirit of social responsibility which has come to the fore in the West has barely entered the field of vision of social critics in many less developed areas. Consequently, socialism and other radical-sounding language means no more to many non-Communist leaders and intellectuals than social reform, legislative safeguards, and a mild bias toward public enterprise—not necessarily exceeding the features of a mixed economy that have already become commonplace in quite a few advanced countries, in some respects including the United States.

It would be a grievous, indeed a fateful, error if the Communist bloc were permitted to monopolize for its purposes this latent desire for social betterment and if the West were to permit itself to be identi-

[13] Such as the Cooley amendment to the Agricultural Trade Development and Assistance Act; and the call to make more room for private collaboration, including the use of contractors, in American governmental assistance, see e. g., "Report of the Committee on World Economic Politics" (Boeschenstein report), Washington, Jan. 22, 1959; "Expanding Private Investment for Free World Economic Growth" (Straus report), Washington, April 1959; and "Economic Assistance Programs and Administration," third interim report (Draper report), Washington, July 13, 1959.

fied with an image of capitalism that is a caricature of modern conditions. The first precondition for avoiding this evil is a more discriminating understanding of the true aspirations of these countries and a greater willingness to tolerate even those distinctive features which we would not necessarily seek ourselves.

In good part, the apparent conflict is one of 19th century images rather than one of modern economic actualities. The rift between the meaning of words like socialism and capitalism to Americans and to Indians and Burmese is much wider than the difference in actual policy. True, public initiative is more favored in these countries than in the United States today. But, due to a paucity of human and financial resources in early stages of economic development, this has been a common feature in the 18th and 19th centuries, even in the free-enterprise economies of the West, not excluding the United States, where private initiative has nonetheless thereafter taken over.[14]

If these factors were considered, perhaps a premature insistence on private investment, even where the economic and human infrastructure is lacking, might be avoided, lest the ensuing disappointment would strengthen the bloc's strategy. Moreover, repetitive and sometimes nagging representations tend to be interpreted as interference by people who are jealously insisting on their right to adopt their own path to economic development; and this goes no less for the promotion of our system, no matter how superior we believe it to be, than for the advocacy of the Communist ideology which is all too ready to monopolize certain vague preferences for the public system. As a matter of practical policy, as one observer has said, "for most of these countries the critical question is not one of government management versus private management. It is whether totalitarian methods will eventually be resorted to in order to increase the level of saving." [15] At this point, and with the Communist bloc watching on the sidelines, excessive or untimely zeal can easily prejudice the future acceptance of foreign capital in the less developed areas, while a more pragmatic accommodation to the development aspirations of the new nations may, with time, achieve the same end much more effectively.

3. SINO-SOVIET TRADE [16]

Trade as an instrument of foreign policy

Another study is going to deal with East-West trade as a whole. This paper is therefore going to limit itself to those aspects of bloc trade with the less developed areas that are illustrative of its use as a policy instrument and of its impact effect on the bloc's trade partners. Quite frequently Communist trade is discussed in rather vague terms as a weapon that is used for penetration or to induce dependence. It is useful to inquire what these terms mean, to what extent trade can be instrumental in political influence, and what, in particular, Communist trade seems to be achieving in this respect. For the present

[14] For historic examples, see, e.g., Henry G. Aubrey, "Deliberate Industrialization," Social Research, June 1949, and "The Role of the State in Economic Development," papers and proceedings, American Economic Review, May 1951.

[15] Thomas C. Schelling in the American Assembly, "International Stability and Progress: United States Interests and Instruments" (New York, 1957), p. 159.

[16] In addition to the sources mentioned in the first and second footnotes, this section has drawn on Raymond F. Mikesell and Jack N. Behrman, "Financing Free World Trade With the Sino-Soviet Bloc" (Princeton, 1958).

task of comparison, two related questions need to be asked. (1) Since the bloc's external trade is so very much smaller than the West's—only about 3 percent of world trade—why should it be suspected of such disproportionate influence? (2) Does the Soviet system of trading lend itself to applications that the free world does not possess or cannot use with comparable effectiveness?

One important institutional difference comes immediately to mind. Decisions on trade, as on most other matters under the Soviet system, are made centrally and can then be put into effect very rapidly. Under Western practice, trade occurs through uncoordinated decisions of numerous private parties. True, in times of war and for security reasons, Western commerce is subjected to controls, but they are essentially negative; in other words, undesirable trade can be prohibited or limited, but private trade cannot be directed into preferred channels without infraction of the West's self-imposed international rules.

The bloc, by contrast, can shift its trade with deliberate intent and has demonstrated that it can turn it on (e.g., Iceland, Burma, Egypt) or off (e.g., Israel, Yugoslavia, Japan) at the spur of the moment. Moreover since the bloc's market potential is naturally large, the quantities involved in individual deals are sizable compared with the West's atomistic and impersonal market operations. This does not mean that all bloc trade is, so to say by definition, planned with malicious intent, an impression too easily fortified by Soviet fondness for adorning policy pronouncements with political rationalizations. Yet, undoubtedly, the bloc is interested in imports to an increasing extent—indeed Communist China vitally so—and imports have to be paid for by exports of merchandise or gold. Thus an assumption that all Communist trade is more politically than economically motivated blocks a more discriminating understanding of the economic advantage that trade can confer even on a totalitarian economy.[17]

It is often said that the Communist bloc does not care about costs and can therefore be expected to dump exports or overbid for imports as its political purpose demands. Sometimes, a feeling of helplessness stems from this line of thought.[18] But it seems to me desirable to question both the premise and its defeatist conclusion.

Undoubtedly, the bloc has the economic potential for disruptive activities if it so desires, but there is no reason to believe that the Communist policymakers would not be acutely aware of the price. Cost calculations are important in the Soviet economy even though their foundation is open to objections by Western standards. As the Russians run into resource limitations they become more and more productivity conscious and make strenuous efforts to reduce costs on all fronts. In foreign trade they have been found to drive hard, sometimes even sharp, bargains. It is therefore necessary to examine the facts and to distinguish between what the bloc has the capability of doing and what it has actually done, between its trade potential and its actual practice. In my judgment, the Soviet bloc in Europe, at least, has so far done little that was not economical from its own point of view, no matter how important the political element in the policy decision might have been.

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[17] Alec Nove, op. cit., and "Soviet Trade and Soviet Aid" in Lloyds Bank Review, January 1959; Jan Wszelaki, op. cit., and A. Doak Barnett, op. cit.

[18] E.g., Baron Bonvoisin, "Can We Meet the Soviet Trade Competition," Belgian Trade Review, March 1959. "We are therefore led to believe that the Western World is largely powerless in the face of Soviet commercial policy" (p. 21).

Trade or aid?—Trade as aid

On of the most significant (and least discussed) features of the Soviet trade system is its ability to combine trade and aid in such a manner that the bloc manages to make the best of both. Since aid is eventually repayable in local products, it is made to appear as deferred trade. And at the same time the bloc manages to make trade look like aid by appearing on the scene when its custom is most welcome. The West, by contrast, sometimes seems to get the worst of both worlds psychologically, in the sense of the second impact effect.

Paradoxically, the slogan "trade, not aid" was coined in the West to denote a preference for letting the developing countries earn more foreign exchange through exports rather than unilaterally through assistance. Even though the imports of industrial countries have increased sharply, the intended shift was impeded by the vocal protests of domestic producers and the resulting imposition of restrictions, especially in the United States. To be sure, some of the most objectionable measures were avoided, but the adverse political impact abroad of those adopted was much greater than statistics alone may seem to justify.

In the context of competitive coexistence three elements were bound to leave an unfavorable impression by comparison with Soviet practice: Public display of dissension and the ascendancy of policies that, in a pinch, would harm rather than help the trade of primary producers; a cleavage between the philosophy of free trade and nondiscrimination that is being expounded to the less developed areas, and the actual practice applied to some of their own vital exports; and certain painful limits to trade complementarity between primary producers and the industrial West, in contrast to the standing claims that the Western system offers the best prospect for a stable and growing world trade.

While the bloc has used its capacity to increase imports to the hilt—and thus made the instances of Western reluctance stand out even more sharply—the United States possesses the inverse capability of supplying its surpluses to a needy world with a generosity the Communist bloc cannot begin to match. But the American surplus disposal has been set up in a manner that deprives this country of most psychological-political benefits. Although the largest part of the local currency proceeds from the sale of surpluses is promptly loaned to the recipient countries for economic development, the transaction is called a sale. As a result, some recipient countries feel they are doing the United States a good turn by ridding it of its surpluses. By the same token, the appreciation due to a loan or grant is forfeited by insisting that the deal is a sale. The institutional origin of this procedure is clear and need not be discussed here; but this is an instance of the difficulty in this country—and the contrasting ease in the Communist bloc—in adapting programs with immense impact abroad to the exigencies of foreign policy rather than to domestic convenience.

The Sino-Soviet bloc as a "buyer of last resort"

The most impressive instances of shrewd and timely trading decisions on the part of the bloc occurred when a country ran into trouble through inability to sell enough of its main exports in the non-Com-

munist world. Since the events are well known, the implications rather than the chronology will be discussed here.

When Iceland's fish was barred in Great Britain in 1952 as a move in a dispute over the extension of territorial waters, the Soviet bloc increased its purchases so that its share in Iceland exports rose from 7 percent in 1952 to 25 percent in 1954. This dispute between two partners of the Western alliance is continuing and in 1958 the bloc held no less than 35 percent of Iceland's exports and 32 percent of its imports. This thorn in the side of Western unity thus remains.

The West is not a large factor in the world's rice markets, though the sale of American excess stocks at the time when Burma's concern with its surplus reached its peak may have been a disturbing element, at least psychologically. In fact, Burma's failure to recognize the trend toward market saturation and reduce its price in good time was the major cause why Burma had accumulated much larger unsold stocks than its competitors. But in any event, the timely offer by the block in 1955 to buy up 750,000 tons of rice appeared like a godsend, even though the quantities actually shipped were much smaller. This was not the bloc's fault, but the rice market had turned and rice could again be sold for cash. This fortunate development, for which the West can really not claim any credit, provided a rare demonstration of the drawbacks of bilateral trade in comparison with free markets which were again functioning; this lesson was publicly acknowledged by the Burmese leaders, who were, moreover, in some respects disappointed by the price or the quality of the goods received in turn from the bloc.

An oversupply of cotton gave an opening to the bloc in Egypt and Syria which have now joined in the United Arab Republic; but there is no such happy ending to the story as in the case of rice—at least not yet, even though it seems that Syria's trade with the bloc has fallen off sharply in the first part of 1959.[19] The bloc has become by far the largest customer of Egypt and Syria, absorbing 44 and 31 percent, respectively, of their exports in 1958. Reportedly, there was some friction over resales of cotton by the bloc at lower prices, not surprisingly, since the price of cotton in Alexandria had been driven above the world price as a result of Soviet purchases. In the Sudan, too, where surpluses of long staple cotton have been increasing, the bloc has made offers to buy on a large scale and pay with development goods and technical assistance but, so far at least, the Sudanese Government has not gone along with these attempts.

The common element of these three instances is clear. It was the inability of primary producing countries to sell their products at what they considered remunerative terms. True, if they had slashed their prices to the bone they might have sold more, but in that event their export receipts would have been greatly reduced as, unhappily, the demand for most primary commodities is so rigid that drastic reductions are necessary to achieve significantly higher sales. Since most of these countries are bent on economic development that calls for rising exchange receipts to pay for larger imports year after year, any sharp drop of export volume or prices is sorely felt; and any

[19] Harry B. Ellis in the Christian Science Monitor, Aug. 6, 1959.

recession in Western industrial countries is particularly feared because it usually means both less volume and lower prices.

The Soviet bloc is taking advantage of such situations in two ways: by becoming known as a friend in need, and by driving home the point that the capitalist system is inefficient, cannot avoid crises, and makes the less developed countries shoulder the burden by pushing down the prices of primary products they sell while maintaining or raising the prices of manufactures they have to buy. Anyone who has followed the relative price movements during the recent recession will have to admit that this was the outcome even though there was certainly no malicious intent on the part of the industrial countries; thus, between 1956 and 1958 the terms of trade of industrial countries improved by 5 percent, while those of other countries deteriorated by 7 percent.[20]

The bloc has made the most of these opportunities through shrewd timing and considerable flexibility. When the Burmese needed outlets, the bloc was ready. When they wanted to sell less because the market for cash sales had expanded, the bloc was willing. Either way they acted like a disinterested friend, and this is just the way the Communists always picture themselves. The implication is that another time they will help again, true buyers of last resort, in contrast with the West where instability seems to originate and where moreover—as with American cotton and rice—competition rather than relief is often found. It is not hard to see that the psychological-political impact effect of such trade can be much greater than the amounts involved would seem to justify.

Purely economically speaking, one might be inclined to wonder whether the emergence of a buyer who is able and willing to absorb worldwide surpluses is not a good thing. In some commodities, e.g., rubber and wool, bloc purchases have tended to raise or stabilize commodity prices. This effect is most marked, and perhaps most welcome, where the bloc buys on established exchanges or auctions and thereby improves the "tone" of the Western market system. But if the bloc's trade partner is enmeshed in bilateral agreements, the more frequent form of Communist commerce, the free world's trade will rarely benefit.

The obvious response for the West is to reduce the opportunities from which the bloc could benefit. The case of rice shows that the reemergence of sufficient demand provided a timely escape from bilateral shackles for Burma. Perhaps this course of events is not typical because the surplus had been largely due to a few exceptionally good crops; and if Communist China ever emerges as a major exporter of rice—and this could happen if a mere fraction of its vaunted production increases became true with time—the situation may again become quite serious. In that event, the bloc's opportunities will rise in inverse proportion with the West's ability and willingness to help Burma or other producers with their problems in an alternative manner.

It is equally relevant for a sober evaluation of the surpus problem that Egypt and Syria have still not found enough alternative mar-

[20] United Nations, Monthly Bulletin of Statistics, July 1959, p. X.

kets to reduce the importance of the bloc for their trade. It does not help the West's cause that the United States is a competitor who keeps piling surplus on surplus that must be unloaded on the world markets; and this country is far too large a factor in world cotton to avoid having its subsidized export sales make themselves felt adversely, no matter how circumspectly they may be conducted. Thus, domestic political-institutional factors aggravate the world impact, to the detriment of the West's position, while in the case of fish from Iceland inability to subordinate a relatively minor dispute to the overriding goal of Western unity continues to have similar debilitating effects.

In all instances the bloc had an important structural advantage: it could absorb these surpluses at little cost and usually with economic benefit. More fish, cotton, rice, and, in other cases, more cocoa from Ghana and Brazil, wool and meat from Argentina and Uruguay, copper wire from Chile, or perhaps some more coffee from Latin America—all these goods could be well used in economies under perennial pressure of excess demand, even if they are not prime necessities. The occasional reexport by the bloc does not necessarily prove the contrary, but may well be due to a need for additional foreign exchange. In any event, the bloc's ability to accept goods the West cannot use suggests a welcome degree of complementarity that is bound to make a favorable impression on primary producers in general.

The peril of overdependence

Whatever the individual circumstances—and each case is different—the broad issue from the angle of competitive coexistence is the danger that a producer of primary commodities may first seek relief in relation with the bloc and then become so dependent on it that a threat, or perhaps the mere possibility, of losing this market would make him vulnerable to political pressure. To be sure, expanded trade provides other more subtle benefits to the bloc as well: the novelty of interchange, broader contacts, friendly relations, prestige; but all these are most effective initially and are bound to wane with time as they become familiar and tend to be taken for granted.[21] But, on the whole, dependence is surely the most critical issue in the long run.

It would be useful if a condition of approaching overdependence could be diagnosed by a simple statistical measure, such as the ratio of total trade that is directed to the Soviet bloc. Table 2 provides this information for selected countries whose exports to or imports from the Sino-Soviet bloc exceeded 10 percent of the total in any one of the last 5 years. Afghanistan could not be included for lack of reliable data, although the proportion of bloc trade is rather high; indications are that it has been in the neighborhood of 30 percent in recent years.

[21] Large embassy staffs ostensibly related to economic matters may also open channels for subversion, perhaps even espionage; the large Soviet staff in Uruguay, for instance, is suspected of being the nerve center of all operations in South America.

TABLE 2.—*Percentage of total exports and imports of selected countries held by the Sino-Soviet bloc, 1954–58*

	1954		1955		1956		1957		1958	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
Iceland	25	18	28	22	30	26	34	33	35	32
Finland	28	28	26	27	27	25	28	31	25	26
Greece	7	3	5	4	10	5	11	6	16	7
Turkey	17	9	22	18	20	15	18	17	24	18
Yugoslavia	3	1	14	8	24	23	28	23	29	28
Egypt	14	6	27	7	34	14	47	26	44	29
Syria	(1)	3	1	3	8	4	17	8	31	12
Iran	18	10	10	9	17	10	23	11	26	9
Burma	(1)	2	19	2	14	19	12	11	3	12
Ceylon	12	11	6	6	11	9	10	5	6	9
Uruguay	10	1	6	1	4	5	8	2	21	5

[1] Less than 1 percent.

Source: State Department, Mutual Defense Assistance Control Act of 1951, "Reports to Congress."

It is immediately apparent that no country has directed as much as 50 percent of either exports or imports to the bloc, only one (Egypt) more than 40 percent, and none as much as 40 percent, if the total volume of trade (exports plus imports) is used as a yardstick. But there is no reason why 50 percent, 40 percent, or for that matter any other figure, should be singled out as a generally valid danger line. On the contrary, quite different figures may be related to potential danger, depending on such factors as the composition of trade, the strategic position of a country, its economic structure and internal political vulnerability, and many others. Most observers would feel intuitively that Turkey's 24 percent of Iran's 26 percent mean less in the case of allies with such a stanch record of independence and anticommunism than the sudden jump from 8 to 21 percent in Uruguay whose inability to sell its meat and wool (partly due to a countervailing duty on wool tops invoked by the United States) has been responsible for some spectacular deals with the bloc.

It is also revealing that the table does not include the bloc's two largest beneficiaries from Soviet loans, India and Indonesia. Though rising, their trade remained below 10 percent, and yet these countries are surely of prime political interest to the Communists—indeed, to the West and East alike. But the list does include Middle Eastern areas where trade, though important, is only one factor, while the bloc's arms deliveries and the unequivocal endorsement of anti-Western sentiments and nationalistic aspirations were probably much more decisive for the successful Soviet penetration into this strategic area.

This line of thought indicates that the problem of dependence cannot be comprehended in statistical terms alone. Commonsense suggests that a large customer will not be lightly spurned if promising alternative markets are lacking. Hence, the degree of dependence, whatever this might represent in specific instances, is primarily a function of the opportunities on which a country can fall back in case of friction with the bloc. If these alternatives are kept open, chances are the bloc would not even attempt excessive pressure for fear of standing accused of the same kind of "imperialistic methods" with which it has labeled the historic "dependence" on Western markets.

Finland and Yugoslavia may serve as examples. The first has developed industries to which the Russian market is truly indispensable; yet, although political pressures have not been absent, the Soviet Union has refrained from using its unquestioned economic power to the hilt in order to achieve political control. And in Yugoslavia, the recent political break was hardly felt at all in the share of Soviet trade.

The limit to the bloc's influence through trade thus depends on the West's success in keeping its own trade healthy and rising, thus denying the bloc the opportunities to obtain strangleholds. The West cannot shirk this effort, since the functioning of the free markets is after all the West's very own concern. This is not the place for the detailed discussion of complex matters and concrete techniques. But it is evident that the task includes most prominently the prevention of recessions or the alleviation of their effects on the weaker countries if they occur nonetheless. And it involves also a coordinated effort to mitigate the instability of commodity prices. This is a difficult problem for which no easy solutions are in sight. But until recently American policy has evaded the issue and this aloofness has been widely interpreted abroad as lack of interest, sometimes as callousness. Without the active participation of the United States, the world's largest importer, these problems cannot be attacked with any hope for success. But a serious and persistent effort, even merely partial solutions, promise to diminish the danger of Communist influence through trade dependence below the threshold of danger on a worldwide scale.

The bloc as a supplier

In its trade regulations with the less developed areas three types of bloc exports can be distinguished: tied sales of manufactures under credit agreements; competitive sales, whether covered by trade agreements or not; and sales of primary commodities in the industrial countries which have repercussions on the less developed primary producers. The Communists usually claim that they are selling at "world prices." This does not seem too far from the truth as a guide to Soviet pricing because the artificial exchange rates maintained by the bloc would make a rational link with domestic costs and prices extremely precarious. The bloc members, therefore, usually keep close to the prices of their competitors, shading them sufficiently to secure the business they want. To be sure, there have been reports of sizable price cuts, some of which cannot always be fully substantiated; from the vantage point of the United States they may appear larger than in comparison with other suppliers, when American prices happen to be higher in the first place. But, on the whole—at least up to now—systematic and large-scale price cutting appears to be the exception rather than the norm for the Soviet bloc in Europe.

Soviet credits are, of course, firmly tied to bloc merchandise.[22] The recipient of aid may find it difficult to argue about the price of goods received and instances of overcharging have leaked out. The bloc, however, seems intent on minimizing such instances and, as in the case

[22] In fact, the strict bilateral system employed makes it usually difficult to switch even from one supplier to another within the bloc, and where such arrangements had been stipulated, as in the case of Finland, the system did not work well.

of Egypt, has been known to respond to complaints. Moreover, where bilateral trade is involved, the price of exports alone means little unless import prices are also considered; in such transactions it is not unusual for the bloc to offer higher-than-market prices and recoup the difference in reverse deals. As the bloc exports are often delayed, it takes time for the facts to become known. But in Burma and Indonesia official statements indicate that the terms of trade with the bloc were unfavorable. There have been hints of dissatisfaction in Egypt, and no one can tell whether diplomatic niceties do not obscure similar sentiments elsewhere. In any event, even where Soviet prices in bilateral transactions were not higher than in free markets, chances are that the bloc's purchases would have raised the price had they been placed on the world market instead of through sheltered channels.

Regarding Communist Chinese exports, reports of price cutting are more plentiful and consistent than in the instance of the Soviet bloc. The reasons are probably both economic and political. China is much more dependent on imports than the Soviet bloc, and while most of its trade is directed toward the latter, all imports from the free world have to be paid by exports. Southeast Asia is a natural outlet geographically, but it is not unlikely that mainland Chinese exports to these areas were stepped up deliberately in order to hurt Japan against whom the Chinese Communists had instituted an embargo following the latter's refusal to give de facto recognition of their flag. It is also possible that they wanted to establish a "presence" and stake a claim in this area, sometimes with the help of pressure on the important overseas Chinese community in southeast Asia; and this effect may well survive the recent sharp drop of Communist exports that seems to have resulted from domestic difficulties.[23]

On the whole, the performance record of bloc trade appears to be neither very good nor all bad from the angle of its trade partners, and this is where the relevant impact effect arises. Deliveries are often delayed, regardless of embarrassment to the buyer. There have been numerous reports of dissatisfaction with the quality of the goods supplied. Partly they may be attributed to inexperience with foreign requirements, partly to bureaucratic inflexibility. But such shortcomings may not be beyond remedy and the more advanced East-Central European countries are recovering their prewar status as exporters and expanding their activities. How well bloc exports would fare in free multilateral trade may well be in doubt. But as long as the greatest part follows the purchase of commodities the West cannot use, the bloc's partners have little choice but to take what they can get in return for their sales. Hence, as in the past, an important part of Communist trade will depend significantly on Western import policy; and to that extent the direction of the less developed area's trade with the bloc will be a function of the growth and flexibility of the Western market system.

These qualities may well be tested by the bloc in still another direction. The Soviet Union has recently emerged as a major exporter of metals and minerals, in some respects in competition with certain

[23] Reexports of Communist goods through Hong Kong and Singapore, major transit channels from the mainland to southeast Asia, have reportedly dropped by 25 percent in the former, and 73 percent in the latter case in the first 5 months of 1959 (Time, Aug. 3, 1959, p. 72).

less developed countries. When the Council of the International Tin Agreement had to absorb large quantities of Russian and Chinese metal in 1957, it was compelled to invoke the statutory export quotas by which the price could be maintained fairly successfully, except for a short period when the agreement's buffer stock manager temporarily ran out of funds. Even though the Soviet Union informally agreed to reduce its tin exports in 1959, the exports of Thailand, Indonesia, Malaya, Bolivia, and Nigeria were reduced to less than half of the preceding year. The impact effect of this incursion by the Soviet bloc has been adverse and quite vocal; and this is a good example of the see-saw character of trade competition.

On the reverse side of the ledger are growing sales of Soviet bloc petroleum in the less developed areas, especially of Latin America. They fill an important gap in the trade of such countries as Argentina, Brazil, and Uruguay. Their erstwhile complete dependence on Western oil has long been a sensitive point in the internal politics of these countries. The negative American attitude toward the ambitions of the government monopoly in Brazil to develop its oil resources without private foreign capital was also involved. Whenever the Soviet bloc injects itself into such a situation, as it recently did also in Bolivia,[24] fuel is poured on this long smoldering disagreement; and in countries where private enterprise fares well in other respects, nationalistic sentiments are fanned by this one issue on which American policy has been more inflexible than on virtually any other. This example illustrates the close interrelation of all kinds of policies to which the Communist bloc is so much more finely attuned, with trade just one convenient instrument.

4. SUMMARY AND CONCLUSION

In the period from mid-1954 to mid-1959 assistance granted by the Sino-Soviet bloc to 20 countries totaled about $2.7 billion. About three-quarters of it was economic aid. Five of the recipient countries received only small amounts (less than $10 million each) while about 90 percent of the total was concentrated in only nine countries receiving more than $100 million each. In the same 5 years the United States gave the same 20 countries about $5.3 billion of economic assistance, more than 2½ times the Communist economic contribution. If aid to the other countries absent from the Soviet list were included, the American assistance amount would be doubled. Total non-Communist bilateral and multilateral assistance is being given at an annual rate of close to $3 billion. If private foreign investment were included, the total yearly flow of capital from non-Communist sources to the less developed areas probably exceeded $5 billion, at least 15 times the actual annual bloc expenditures for foreign assistance.

While this ratio appears comforting, it is questionable whether quantities count for so much. For if they did, why should one be worried about Communist aid that is relatively so small? Actual-

[24] Reportedly the Soviet Union has offered a large loan ot the state oil company in Bolivia, thus capitalizing on criticism of U.S. refusal to finance the reequipment of the state-owned petroleum or mining industries (Juan de Onis in the New York Times, Aug. 19, 1959).

ly the impact of aid is not necessarily proportionate to the amount and it is desirable to distinguish between two very different impact effects.

The first is the direct economic and social impact, a slow change induced over time, often unspectacular, sometimes intangible. The second is the impression aid makes upon the recipient's mind. It is subjective and conditioned by sentiment and prejudice; its impact is direct, immediate, and politically potent. The U.S. development aid programs have been fashioned with the first impact effect in mind. The Communists have shown themselves much more finely attuned to the second.

Due to the second impact effect, it matters at least as much how capital is provided, as how much. For one instance, in many underdeveloped countries private foreign investment included in the above totals is frequently not accorded the same reception as loans. A plant built by the Russians and left behind when they go home may be more welcome than one remaining under foreign control indefinitely. No matter whether right or wrong, the recipient's attitudes shape the political impact, and the Communists have cleverly used the latent suspicion of Western business that rests on anticolonial and nationalistic sentiments. Therefore a nagging insistence on linking assistance to private business tends to support the Communists' taunts that Western aid is a pretext for profits whilst theirs, as they maintain, is disinterested and free of strings.

"Strings" are a psychological and political element, not determined so much by the donor's real intent than by the image in the recipient's mind. There must be conditions to foreign aid, but those that are congenial to the recipient's aspirations are not viewed as strings, while others are considered as interference. Therefore the Communist bloc has catered to the sensitive ego of new nations in both the substance of aid agreements and the pomp and circumstance surrounding the negotiations.

Communist assistance terms strike the observer as being made to appear as different as possible from Western practice. Most bloc assistance takes the form of credits rather than grants which are pictured as entailing debasing obligations. Loans are usually repayable in local products, or in local currency for which local products are to be acquired later. This relieves the recipients of the problem how to muster enough foreign exchange to transfer investment profits, interest, and repayments that burden them in connection with Western capital. It also makes them feel secure in the belief that Communist loans are self-liquidating and that development assistance from the bloc can be paid for with the fruits of development itself.

Interest on bloc loans is much lower than the West's. This bolsters suspicions of exploitation that are rife in formerly colonial areas where imperialism and exploitation are considered inseparable even by many non-Communists. This reinforces the picture of greater affinity between the less developed countries and themselves which the Communists have been trying to create, in order to make the Soviet system appear more suitable for rapid economic growth than the democratic method.

Identification of public enterprise with "socialistic" tendencies also tends to play into the hands of the Communists. In the free-enterprise

economies of the West governmental initiative has also been far broader in early stages of economic development than now. And even today the economic structure of countries like India or Burma differs much less from many European countries than the term "socialist" they like to apply to themselves seems to indicate. It would be tragic if a mere antagonism toward words, or a variance of social imagery, would block the Western understanding of the prevalent aspirations for economic and social betterment which the Communists would dearly like to monopolize.

The number of Soviet technicians, an estimated 4,700 working abroad for more than a month in the first half of 1959, is not too far below the number of American Government technicians abroad. If all Western countries and international agencies, and privately employed technicians were included, the West would, of course, be far ahead of the bloc. But, again, numbers may not be a true measure of impact. The choice of projects for Soviet capital and technical assistance gives also evidence of a desire to be identified with the recipient's aspirations. Sino-Soviet technical assistance is usually linked to large projects, such as mineral development or industry that are close to the heart of developing countries. Moreover the bloc technicians' own background in recently still underdeveloped countries gives eloquent testimony for the feasibility of rapid growth which the new nations also crave.

Communist aid is always closely linked to trade, but trade alone is also made to impress less developed primary producers with the extent of complementarity between them and the bloc. Government monopolies can conclude large transactions quickly, in contrast to the atomistic and uncoordinated trading decisions characteristic of the Western system. Most importantly, the bloc has displayed a superb sense of timing, by appearing as a buyer of last resort when primary producers could not sell their output in Western markets at remunerative prices. Fish from Iceland, rice from Burma, cotton from Egypt and Syria, wool and meat from Uruguay and Argentina—all these deals point to the bloc as a powerful new factor in world trade, even though the bloc's share is no more than 3 percent of the total.

In return, the bloc is able to supply the kind of things the primary producers need, including capital goods for development. The value received was sometimes disappointing to the uncommitted countries, and the lesson has been learned by some that cash is better than bilateral trade whenever it can be obtained. But a continuation or recurrence of surpluses will give the bloc similar opportunities whenever non-Communist markets cannot, or are unwilling, to absorb all output. Hence the bloc's opportunities to capitalize on other countries' embarrassments will be a function of the West's neglect in looking after the health and smooth functioning of the world's free markets.

This is also the answer to the question whether the bloc could attain political control through its power over the trade of smaller nations. The bloc holds a quarter or more of some countries' trade. Where the danger point is depends on many factors, but no government need yield to excessive pressure if it knows that alternative opportunities will again become available, through a turn of the market or through deliberate Western policy. As a result, no instance of sub-

servience through trade with the bloc has yet arisen and the West has the capability, if it has also the will, to develop policies that will deny the bloc the use of its bargaining position for obtaining strangleholds.

Such policies include maximizing the imports of the industrial countries and collaborating in attempts to stabilize the markets for commodities which the less advanced primary producers have to sell, in order to pay for imports of necessities and of development goods. These are really policies the West should want to pursue even in the absence of the Communist threat, for the viability of the world's free markets are the West's very own concern. But, of course, with the Communist bloc waiting to capitalize on the West's mistakes, the penalty for neglect is so high that aloofness is no longer feasible and concerted action indispensable. The United States, the world's largest trading nation, would do well to recognize the trend and to lead rather than lag on the road to better Western economic collaboration with the less developed areas.

EVALUATION OF THE RUSSIAN ECONOMIC THREAT BY PRIVATE POLICYMAKERS

EVALUATION OF THE RUSSIAN THREAT IN THE FIELD OF ELECTRIC POWER

(By Edwin Vennard, Edison Electric Institute, New York, N.Y.)

I. Introduction

Two visits to inspect electric power installations and facilities for the manufacture of electrical equipment in the Soviet Union have provided Americans in the power industry with new statistics, facts, observations and impressions upon which an appraisal can be based. These trips were arranged by the U.S. Department of State and its counterpart in the U.S.S.R. They were part of the technical and cultural exchange program between the two countries. Our group represented the electric utility industry and the manufacturers of electrical equipment.

The tours were conducted under the auspices of the Edison Electric Institute and the Association of Edison Illuminating Companies, trade associations of investor-owned electric utilities.

The first visit was from August 14 through August 30, 1958. There were seven electric utility executives and three executives of manufacturing companies on this tour. Aside from myself, the members of the delegation were—

Mr. Harvey E. Bumgardner, assistant to the president, the Detroit Edison Co., and chairman, committee on technical exchange for overseas visitors of the Edison Electric Institute.

Mr. Walker L. Cisler, president of the Detroit Edison Co. and the leader of the group as appointed by the Edison Electric Institute.

Mr. J. F. Davenport, executive vice president, Southern California Edison Co.

Mr. D. S. Kennedy, president of the Oklahoma Gas & Electric Co. and past president of the Edison Electric Institute.

Mr. Elmer L. Lindseth, president, the Cleveland Electric Illuminating Co.

Mr. Gwilym A. Price, chairman of the board, Westinghouse Electric Corp.

Mr. Philip D. Reed, chairman, finance committee, General Electric Co.

Mr. R. G. Rincliffe, president, Philadelphia Electric Co., and vice president of the Association of Edison Illuminating Companies.

Mr. J. L. Singleton, executive vice president, Allis-Chalmers Manufacturing Co., and president, National Electric Manufacturers Association.

This tour covered European Russia.

The second trip was from July 23 through August 4, 1959, at which time we visited facilities in Siberia, the Urals, and in Armenia. On

this trip were seven representing the utilities, two the manufacturers, and one representing an engineering construction firm. Besides myself, they were—

Walker Cisler, president of the Detroit Edison Co. and the group leader.

Harvey E. Bumgardner, assistant to the president, the Detroit Edison Co.

J. F. Davenport, executive vice president, Southern California Edison Co.

Charles E. Eble, president, Consolidated Edison Co. of New York.

Lewis R. Gaty, vice president, research and development, Philadelphia Electric Co.

D. S. Kennedy, chairman of the board and president, Oklahoma Gas & Electric Co.

Francis K. McCune, vice president, atomic business development and marketing services, General Electric Co.

Alexander C. Monteith, vice president and general manager, apparatus products, Westinghouse Electric Corp.

J. Perry Yates, executive vice president, Bechtel Corp.

In 1958 the host organization was the Ministry of Power of the U.S.S.R.[1] Between the 1958 and 1959 visits there was a slight change in the system of administering the electric power industry. Accordingly, the host organization for the 1959 trip was the Ministry of Construction of Power Stations.

Twelve executives and specialists representing the Ministry of Construction of Power Stations in the U.S.S.R. will visit facilities of electric utility companies and electrical manufacturing companies in America, beginning October 5, 1959.

This paper is a summary of the facts respecting the power facilities in the U.S.S.R. It includes what we saw and what we were told. To assist in an evaluation, suitable comparisons have been made with the electric power facilities in America. In addition, the report includes an opinion as to the economic significance of the facts, especially as they relate to the electric power business.

The Americans found the Russians they met to be friendly, courteous, and hospitable. They were eager and sincere in their efforts to give us information about the status of the electric industry in Russia. They were equally anxious to learn about similar facilities in America. On the first trip after a briefing by the heads of the Ministry of Power, we visited—

Moscow Research Institute.
All-Union Institute for Thermal Research.
Nuclear research center at Dubna.
Industrial and agricultural exhibit in Moscow.
Three typical thermal power stations.
Two of the larger hydroelectric stations.
Atomic prototype powerplant at Obnisk.
State planning commission.
A principal substation near Moscow.

[1] App. A contains the names of the principal hosts on each of the tours.

A large plant for the manufacture of turbines, generators, and transformers.

A principal dispatching center.

At the close of the trip there was a final meeting with the officials of the Ministry of Power.[2]

On the second tour, we again had a briefing by the officials of the Ministry of Construction of Power Stations, following which we visited [3]—

Hydroelectric station at Irkutsk.
Construction site of 4,500,000 kilowatt hydro plant at Bratsk.
Hydro plant and generator works at Novosibirsk.
Thermal stations at Youzhno-Kuzbass and Youzhno-Uralsk.
Atomic powerplants at Beloyarsk and Voronezh.
Hydro plants at Sevang-Razdan Cascade.

II. Russia's Electric Power

THE MAIN SYSTEMS

There are 52 power systems in all of the U.S.S.R. Many of these are individual plants, not interconnected with any power grid. Within European Russia the three principal, interconnected systems are the central (including the Moscow, Yaroslav, Ivanova, and Gorky systems), the Urals (including the Molotov, Sverdlovsk, and Chelyabinsk systems) and the southern (including the Dnieper, Donets, and Rostov systems). Each of these main systems has a capacity of 6 or 7 million kilowatts. At some indeterminate time in the future, these three systems are to be linked with other systems in European Russia and the six systems in central Siberia to form a single power grid.

Transmission, capacity, and generation—United States compared

Figure 1 shows a transmission map of the Russian systems as of 1958. For comparative purposes, figure 2 shows the principal interconnected electric transmission lines of the power facilities in the United States. The following table shows the kilowatts of capacity and the kilowatt-hours of electric energy generated in the United States and the U.S.S.R. for the year 1958 both for hydro and steam:

[2] See app. B for the dates of these visits.
[3] See app. C for a more detailed outline of this second tour.

FIGURE 1


Схема электрических станций и сетей на 1958 год
Каспийское море
Черное море
Баренцово море
Карское море
Охотское море
Тепловые электростанции
Гидростанции
Подстанции 400 кв
Подстанции 220 кв
Линии электропередачи 400 кв
Линии электропередачи 220 кв
Афганистан
Китай

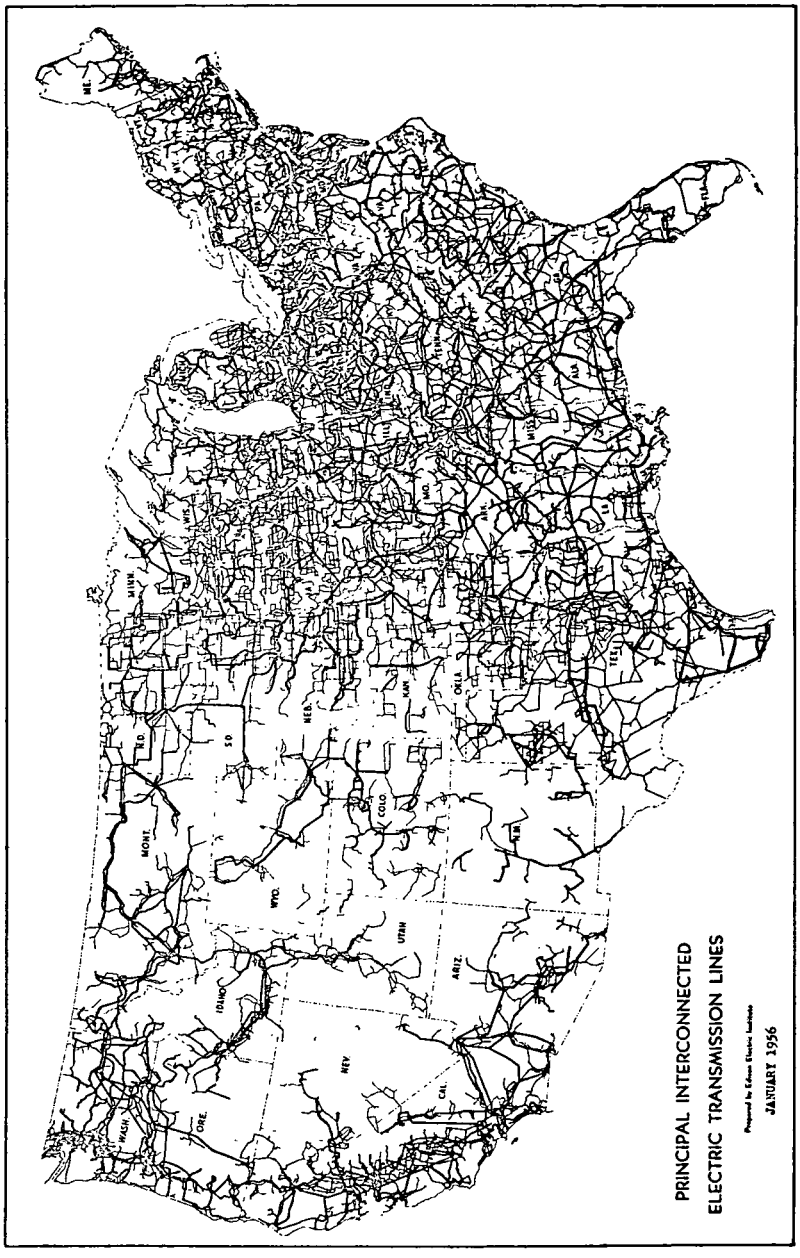

PRINCIPAL INTERCONNECTED
ELECTRIC TRANSMISSION LINES
JANUARY 1956
WASH
ORE
CAL
NEV
IDAHO
MONT
WYO
UTAH
ARIZ
COLO
N.M.
N.D.
S.D.
NEB.
KAN.
OKLA.
TEX.
MINN.
IOWA
MO.
ARK.
LA.
MISS.
ALA.
WIS.
ILL.
TENN.
FLA.

FIGURE 2

Kilowatts, installed capacity, 1958

	United States [1]		U.S.S.R.	
	Millions of kilowatts	Percent	Millions of kilowatts	Percent
Hydro	30.1	19	10.5	20
Steam	130.1	81	42.5	80
Total	160.2	100	53.0	100

Kilowatt-hours generated, 1958

	United States		U.S.S.R.	
	Billions of kilowatt-hours	Percent	Billions of kilowatt-hours	Percent
Hydro	143.4	20	43.8	19
Steam	580.6	80	189.2	81
Total	724.0	100	233.0	100

[1] Total United States, including industrial, mine, and railway electric powerplants.

In the Soviet Union thermal stations operate from 4,500 to 7,000 hours a year (representing annual load factors of 51.4 to 80 percent) and the hydro stations from 4,000 to 5,500 hours a year (representing annual load factors of 45.6 to 62.8 percent). As in this country, the hydro stations are used for peaking purposes as well as for base load.

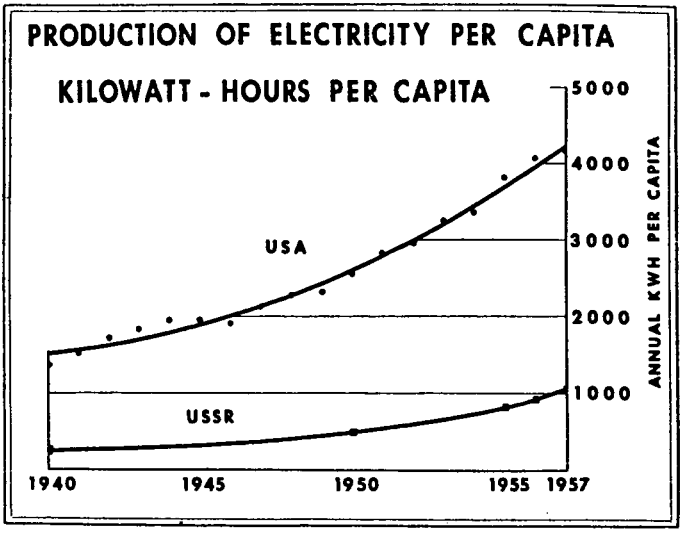
Energy resources, United States and U.S.S.R.

The Union of Soviet Socialist Republics has an abundance of coal for fuel. It has been estimated that energy resources in the Soviet Union are as follows (United States shown for comparison):

	U.S.S.R.	United States
Coal reserves, billion short tons (National Coal Association)	1,763	1,895
Crude petroleum reserves, billion barrels (World Oil, Aug. 15, 1959)	24	30.5
Proven gas reserves, trillion cubic feet (American Gas Association, World Oil, supra)	706	254
Potential waterpower, mean flow, million horsepower (U.S. Geological Survey Circular No. 367, U.S. Department of Interior)	375	116

Figure 3 shows the production of electricity in kilowatt-hours per capita for each of the two countries from 1940 through 1957.

FIGURE 3



Russia places great emphasis upon the building of the industrial plant or the machinery of production. As a consequence, about 80 percent of the total production of electricity is for industrial purposes. The remaining 20 percent is used by commercial establishments, the homes, and the farms.

For comparison, the following table shows the use of electricity in the United States by the major classifications for 1958.

	Billions of kilowatt-hours	Percent
Residential	159.1	28.0
Commercial	101.2	17.8
Farm (rural)	11.1	1.9
Industrial	275.0	48.3
All other (street and highway, other public authorized railroads, etc.)	22.8	4.0
Total	[1] 569.2	100.0

[1] The difference between this figure and the 724.0 billion kilowatt-hours shown on the preceeding page represents generations of industrial, mine, and electric railway powerplants plus company use and losses.

STEAMPLANTS

Cherepetz and Youzhno-Uralsk

Probably the most modern steamplant operating in Russia today is the 450,000-kilowatt station at Cherepetz, about 2 hours' drive from Moscow. It has turbines of 150,000-kilowatt capacity, and operates at a pressure of 2,490 pounds per square inch and 1,040° F.

At the Youzhno-Uralsk Thermal Station, near Chelyabinsk, we saw a present capacity of 600,000 kilowatts with four 50,000-kilowatt units

and four 100,000-kilowatt units. An addition to the plant is being built to contain two 200,000-kilowatt units, bringing the total capacity to 1 million kilowatts in this station.

We were told that units of 300,000 and 600,000 kilowatts are now being designed.

In 1957 Russia had 56 turbogenerators of 100,000-kilowatt capacity and 3 turbogenerators of 150,000-kilowatt capacity in operation.

By comparison, the first American steam-generating unit of over 200,000 kilowatts was installed in 1929. Today, the United States has a great number of machines of this size. At the present time, three units of 500,000-kilowatts capacity and one of the 600,000 kilowatt capacity are under construction in the United States. The following table shows the number and aggregate capacity of new thermal units scheduled as of July 1, 1959, grouped according to size range.

[In terms of manufacturer's ratings of the units]

Size range (thousand kilowatts)	Number of units	Aggregate capacity (thousand kilowatts)	Percent of total	Size range (thousand kilowatts)	Number of units	Aggregate capacity (thousand (kilowatts)	Percent of total
Under 100	93	3,326	8.4	300 to 399	21	6,693	16.9
100 to 149	49	5,562	14.0	400 to 499	2	900	2.4
150 to 199	51	8,240	20.8	500 and over	4	2,100	5.3
200 to 249	38	8,058	20.3				
250 to 299	18	4,785	12.0	Total			100.0

Pressures and temperatures

Russia makes use of high pressures and temperatures. At the thermal stations in service today, 58.7 percent of the installed equipment operates on steam of high pressures and temperatures, in the range of 1,420 pounds per square inch and of 930° F.

In the United States, the newer stations are being built with steam pressures of 2,400 pounds per square inch and temperatures of 1,050° F. The highest temperature and pressure planned for a plant in the United States will be in the Eddystone Station of the Philadelphia Electric Co., which will operate at the supercritical pressure of 5,000 pounds per square inch and the temperature of 1,200° F. A plant is in operation today at a pressure of 4,500 pounds per square inch and temperature in the 1,150° F. range.

HYDROELECTRIC STATIONS

The Soviet Union has developed a number of large efficient hydroelectric stations. We visited Kuibyshev on the Volga River, located about 560 miles southeast of Moscow. It has 20 units, each having an operating capacity of 115,000 kilowatts, for a total capacity of 2,300,000 kilowatts.

About 1,250,000 kilowatts of the station's capacity is transmitted to Moscow over a 400,000-volt transmission line. The rest of the capacity goes to the Urals, over transmission lines of similar voltage.

The Stalingrad hydroplant, also on the Volga, was under construction when visited in 1958.

A 4,500,000-kilowatt hydroelectric station is under construction at Bratsk, located in a very thinly populated area in Siberia. It is expected that the first units of this plant will be in operation in 1961. The plant will be completed by 1963. We were told that Russia plans to move industry into this area to utilize the power. Also, part will be used in the further electrification of the Transsiberian Railroad.

ATOMIC POWER STATIONS

The following is a brief description of the known atomic power stations in the U.S.S.R. The capacities shown are in electrical kilowatts.

Operating

1. Five thousand-kilowatt enriched uranium-fueled graphite moderated light water cooled reactor. It is located at Obnisk, near Moscow, and has been operating since 1954. We visited this station in 1958.

2. One hundred thousand-kilowatt dual purpose natural uranium-fueled graphite moderated light water cooled reactor. This station was announced at Geneva in 1958 by U.S.S.R. It is located in Siberia. We did not visit it.

Under construction

3. Four hundred and twenty thousand-kilowatt two-reactor pressurized water slightly enriched uranium oxide fuel with zirconium cladding. It is located at Voronezh in the central industrial region. The first phase of this plant is now under construction, for a total of 210,000 electrical kilowatts in three 70,000-kilowatt units. We were told that the second stage of 210,000 kilowatts will not be constructed until it is determined how the first stage will operate. We were told this first unit will be in operation in 1961.

4. One hundred thousand-kilowatt boiling water reactor located at Beloyarsk in the Urals. We saw this station under construction. We were told that it will be in operation in 1961.

5. Fifty thousand-kilowatt boiling water slightly enriched uranium fuel reactor. It is located in the Ulyanovsk region. We did not visit this station.

Summary of atomic power

	Electric capacity-kilowatts
1. Obnisk	5,000
2. Natural uranium	100,000
3. Voronezh (1st stage)	210,000
4. Beloyarsk	100,000
5. Ulyanovsk	50,000
Total	465,000

U.S. program compared

For comparative purposes we list below a summary of the present atomic power development program in the United States.

By the end of 1958, a little over 4 years since the passage of the 1954 Atomic Energy Act (which permitted industry for the first time to engage in development and construction of its own atomic plants), a total of 131 electric-power companies and associated service organizations were participating in projects for the development and construction of 16 atomic powerplants and 11 major research, development, and study projects.

The 16 plants in which electric-power companies are participating will have a combined capacity of about 1,400,000 kilowatts and will require an estimated expenditure by the companies of more than $570 million.[5]

PLANTS IN OPERATION

Company	Type of reactor	Electrical capacity of plant, kilowatts	Operation
Duquesne Light Co	Pressurized water	60,000	December 1957
Pacific Gas & Electric Co	Boiling water	5,000	October 1957
Southern California Edison Co	Sodium graphite	7,500	July 1957.

PROJECTS UNDER CONSTRUCTION, DESIGN, OR CONTRACT NEGOTIATIONS

Commonwealth Edison Co. Nuclear Power Group.	Dual cycle boiling water	180,000	1960.
Consolidated Edison Co. of New York, Inc	Pressurized water thorium converter.	275,000	1961.
Northern States Power Co., Central Utilities Atomic Power Associates.	Boiling water with nuclear superheater.	66,000	1962.
Pacific Gas & Electric Co	Advanced boiling water	50,000	1962.
Detroit Edison Co.-PRDC	Fast breeder	100,000	1960.
Yankee Atomic Electric Co	Pressurized water	134,000	1960.
Carolinas-Virginia Nuclear Power Associated.	Heavy water moderated and cooled.	17,000	1962.
East Central Nuclear Group, Florida West Coast Nuclear Group.	Gas cooled, heavy	50,000	1963
Philadelphia Electric Co.-HTRDA	High temperature, helium cooled, graphite moderated.	30,000	1963.
General Public Utilities Corp. System	Water	5,000	1961.
Consumers Power Co	Boiling water, high power density.	50,000	1962.

PLANTS IN VARIOUS PLANNING STAGES

New England Electric System	Not yet selected	200,000	Mid-1960's.
Pacific Gas & Electric Co	do	200,000	

NOTE.—These projects involve investor-owned companies only. In addition, public power organizations in cooperation with the AEC, will participate in the building and operation of 3 nuclear powerplants having a combined capacity of about 110,000 kilowatts. These plants will require an estimated expenditure by these public power organizations of about $32 million.

U.S.S.R. policy on atomic power

We were told by the U.S.S.R. scientists that the atomic power program in Russia is still in the research and development stage, just as it is in the United States. Russia expects its cost of producing power from atomic fuels to be above its costs from conventional fuels. Likewise, this has been the case in the United States. As a consequence, Russia does not plan any large-scale development of atomic powerplants until it is possible to make energy from atomic fuels as economically as from conventional fuels.

Russia feels as we do that ultimately a way will be found to make economical power from atomic fuels. Consequently, they are going forward with their research.

[5] The knowledge, experience, and financial assistance of the Atomic Energy Commission have been valuable in the development of all these projects. In two of the operating projects the AEC has paid for the reactor portion of the plants. The cost of construction, research, and development of several other plants is being borne by the electric companies involved. But in the majority of the projects valuable assistance in the form of research and development grants and waiver of charges on special nuclear material is being given to the electric-power companies by the AEC.

TRANSMISSION

From a technical standpoint some of the most interesting work going on in Russia today is in the field of high voltage transmission. Eleven hundred miles of lines are now operating at 400,000 volts and it is expected that these lines will shortly be converted to 500,000 volts.

The construction of an 800,000 volt direct current transmission line from Stalingrad hydroelectric station to the Don Basin is expected to be completed in 1962. This is a distance of about 300 miles. The transmission capacity is to be 750,000 kilowatts.

In the United States the highest voltage transmission lines are 345 kilovolts. The next higher step will be 460 or 500 kilovolts. Tests are being made at the present time on a high altitude 500-kilovolt transmission line at Leadville, Colo.; at Pittsfield, Mass., the General Electrict Co. is building a 4½-mile line which will be operated at 750 kilovolts. No high-voltage direct current lines are as yet planned.

At the end of 1957 the total length of transmission lines in the U.S.S.R. of 35,000 volts and above was about 62,140 miles. In the United States the total length of lines 35,000 volts and above was 240,000 miles in the same year.

APPRAISAL OF RUSSIAN TECHNICAL SKILL

Russia's power specialists

In the field of engineering and construction of power facilities, we believe the Russians are good. They are making good turbines and generators. We were unable to get any figures on the efficiency of manufacture, but the resultant product is good. We believe the Russians capable of building the larger units. Also, in the fields of transformation, transmission, and dispatching we believe the Russians to be competent. Their research facilities are good.

III. Forecasts

CONSTRUCTION PLANS, ELECTRIC INDUSTRY

We were told that Russia plans to install 60 million additional kilowatts by the end of 1965, which would bring U.S.S.R. total capacity to something in the neighborhood of 110–112 million kilowatts.

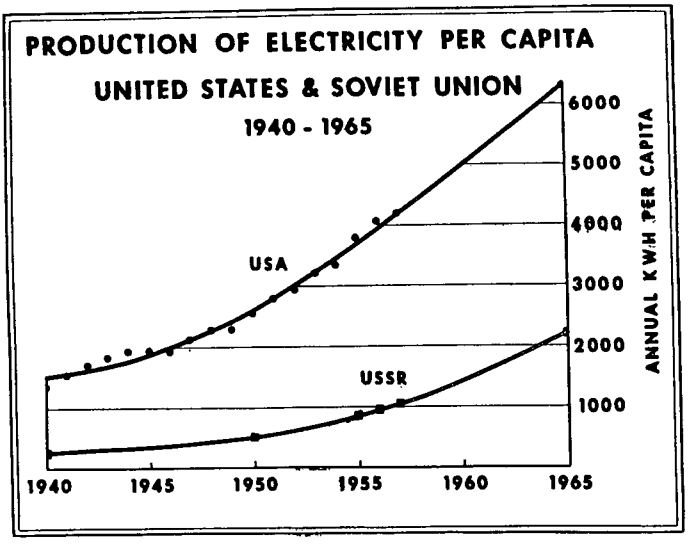
By comparison, we have under construction in America 51 million kilowatts of new capacity for the 4 years ending 1961. The new capacity we will have installed from 1958 to 1961 is slightly greater than Russia's 1957 total. The following table shows the announced and estimated Russian plans to 1965 as compared with the United States for the same period.

Millions of kilowatts of capacity

	United States	U.S.S.R.
1957	146.2	48.4
1965	245.0	110-112

Figure 4 shows the kilowatt-hours per capita extended to 1965. The Russian figures are based upon the capacity quota of 108 million kilowatts. The U.S. figures are our forecast based upon past performance.

FIGURE 4



Will Russia meet its goal of 108 million kilowatts by 1965? Russia places great emphasis on goals or quotas. Managers and workers are encouraged to strive for these goals. It is not known whether the 108 million kilowatt figure is an estimate of what will occur or whether it is a budget or quota.

Russia's "goal" for 1957 was 230.2 billion kilowatt-hours. The actual was 209.5 billion kilowatt-hours, or about 9 percent under the goal.

THE U.S.S.R AND THE FUTURE

Planning to meet industrial needs

It is understandable that the various ministers who plan for the Soviet economy can determine the size of the total industrial plant for any given time in the future and design a plan to reach that goal. Supplying the electric power to fit in with such a plan is not an insurmountable problem; it is fairly simple to state that the light metals industry, for example, will require a certain number of kilowatts, and then to plan for the construction of those kilowatts according to a time schedule.

Problem of nonindustrial use

Bringing about an increase in the nonindustrial use of electricity is more difficult. For example, the average home use of electricity in Russia is about 400 kilowatt-hours per year, as compared with an average of about 3,400 kilowatt-hours per home in the United States in 1958. The use of electricity in the home depends to some extent upon the purchasing power of the people—the purchasing power to

buy appliances as well as electricity. In some respects the use of electricity in the home reflects the well-being of the people in the home. It is a good indication of the standard of living. There is a definitive correlation between the purchasing power of people and the use of residential electricity.

We were told that Russia plans to continue to emphasize the building of the machinery of production. We heard of no plans for the promotion of the increased use of electricity for commercial establishments, for the home, or for the farm.

Goals for 1965

Knowing of Russia's technical and scientific ability, it would be safe to assume that she is capable of reaching a total of 108 million kilowatts in power capacity by 1965.

OPERATION OF THE RUSSIAN SYSTEM

To make a proper appraisal of Russia's productive capacity and potential growth, it is necessary to inquire into the Russian system and how it operates.

System of Government ownership

In Russia all industry is owned and operated by the Government. The Government owns and operates all steel plants, aluminum plants, textile mills, railroads, transportation facilities, power systems and clothing manufacturing plants. The Government is the sole supplier of goods. It owns and operates all stores. Practically everyone works for the Government—all managers, all scientists, all engineers, all doctors, all lawyers, all white-collar workers, all factory workers.

All prices are fixed by the Government. The Government manufactures and sells all goods and services. The margin between selling price and cost of production constitutes the major income to the Government. Other income is obtained through direct taxes.

The Government fixes all wages; there is a set wage for each job. The wages are graduated so that those of lesser ability receive less. Those of greater ability, knowledge, training, and schooling receive more. The bonus or incentive system is used to encourage workers individually and collectively to reach and exceed set quotas.

To the extent that Russia utilizes the incentive wage and pays according to ability, it does not follow the Marxian tenet "From each according to his ability, to each according to his needs."

U.S.S.R. administrative organization

In Russia there are 24 ministries. Included among them are the Ministries of Foreign Affairs, Home Affairs, Finance, Higher Education, Culture, Power, Grain Products, Geology and Conservation of Resources, Agriculture, and Defense.

In 1958 we were the guests of the Ministry of Power. At that time all aspects of the power industry were directed by this Ministry.

When we returned in 1959, we found that the administration of the industry had been changed. Now, the Ministry of Construction of Power Stations is responsible for construction. The operation of the plants is in the hands of local commissions.

The whole Russian system is subject to the control of the Council of Ministers. The Council of Ministers has a staff organization known as

the State Planning Commission which works with the Council in planning all economic and production activities. We visited with the State Planning Commission and its operation was explained to us.

There are 15 separate republics making up the U.S.S.R. These in turn have been divided into 105 economic regions. In some instances these regions overlap the boundaries of the 15 republics. Each of the 105 regions has a regional economic council, and under it is a regional board of power. It is the regional power board which oversees the activities of the various powerplants in the regions.

The regional economic councils draw up individual plans for their districts each year. These plans are intended to cover all phases of economic activity and call for the amounts of material and manpower that will be required to meet industrial objectives. These plans are sent to the Council of Ministers, where they are coordinated and the overall plans established.

In each of the regions the regional economic council is made up of directors representing the basic industries operating in the region. Together they plan the activities of their region. One of these directors is the chief of the regional power board. Under him will be found the individual directors of the various powerplants in the region.

IV. Economics

EXCHANGE RATES

The official exchange rate is 3 rubles per dollar, but Americans are given 10 rubles per dollar. We tried to estimate the proper exchange rate by pricing staple articles in Moscow—clothing, food, a few services, a few appliances. By and large our dollars at 10 rubles per dollar would buy substantially the same as they would buy in New York in terms of staple articles. Of course, there was not the variety nor the quantity available in Moscow that one finds in New York. There were notable exceptions where scarce articles carried unusually high price tags, but generally speaking, the 10-to-1 ratio appeared to be about right as a measure of the cost of living. We had no way of knowing whether, in the cost of building powerplants or other industrial establishments, it was proper to use a ratio of 4 to 1 or 10 to 1, or some other ratio.

Black market

We heard that there is a black market which would give possibly 20 rubles or 30 rubles per dollar. We did not encounter this. But even if there were, this would not alter the fact that the 10-to-1 ratio appears about right in the measure of the standard of living. Russian tourists planning to visit America are limited in the number of dollars they can take out of Russia. Such tourists may be willing to give more than 10 rubles per dollar just for the purpose of buying American articles.

POWER INDUSTRY COSTS

Investment per kilowatt

We asked and were told about certain capital costs in the building of power stations and certain operating costs. Although they are shown here, care should be used in assessing them owing to the different exchange rates in use.

Following are a few examples of investment costs of power stations:

Station and location	Type	Investment per kilowatt [1]
Station 20, Moscow	Steam	$180
Kuibyshev	Hydro	87
Irkutsk	do	200
Bratsk	do	133
Novosibirsk	do	225
Youzhno-Kuzbass	Steam	110

[1] Converted from rubles at 10 to 1.

These costs per kilowatt are not greatly dissimilar from unit costs in the United States.

Production cost, steam plant

The following table shows the cost of producing power at the Moscow Station 20 steamplant.

	Kopeks per kilowatt-hour
Fuel	5.93
Wages	.56
Amortization	1.77
Materials	.49
Maintenance labor	.16
All other	.09
Total	9.00

A kopek is one-hundredth of a ruble. If there are 10 rubles to the dollar, a kopek is then one-tenth of a cent or 1 mill.

Note that amortization takes 1.77 kopeks per kilowatt-hour.

Amortization

We were told that all power stations must be amortized over a period of years; that is to say, the investment is paid back to the Government. The investment in machinery is repaid in 25 years. The costs of other facilities, such as the dam in a hydroelectric station, are paid back in 50 years. Consideration is now being given to a reduction from 25 to 20 years for the repayment of machinery and for extending the repayment period to 100 years for other facilities.

At the Luganskaya thermal plant, the total operating cost including amortization is said to be 4.9 kopeks per kilowatt-hour. Fuel accounts for about one-half of this cost.

Interest and taxes

It is noted that Russia does not consider interest as a cost of doing business. Notice also that there is no provision for taxes in the operation of these plants.

Because of the absence of interest and taxes, we found the reported cost of producing hydroelectric power in some stations to be quite low—as low as 1 mill per kilowatt-hour in some cases.

FUTURE PLANS FOR HYDRO

Emphasis on thermal plants

We were told that in the future Russia will place less emphasis on the development of hydro and more emphasis on thermal plants. Of

the 60 million kilowatts of new capacity planned by 1965, we were told that 85 percent is expected to be thermal and 15 percent hydro, compared to the present ratio of 81 percent thermal and 19 percent hydro. This information is supported by a statement made by Premier Khrushchev in his address at the dedication of the Kuibyshev hydroelectric plant. We were told that the reason for the change in policy is that the hydroelectric plants are more expensive and they take longer to build.

This experience in the relative value of hydro and thermal stations is similar to the experience of the power companies in America. Great improvements have been made in the efficiency of thermal stations, whereas by comparison the increase in efficiency of hydroelectric stations has been slight in the last 25 years. Some years ago hydroelectric power was in most cases cheaper than thermal power. Now with notable exceptions the reverse is true. Also, in America, a primary factor favoring thermal power is that steamplants can be built closer to the load centers, while hydro stations must be built where there is a sufficient head and volume of water. Since most of the good hydro sites have already been developed, remaining sites are likely to be comparatively remote. This generally necessitates a higher investment in transmission to bring the power from the water site to the load centers.

ATOMIC POWER COSTS

In reply to our questions we were told by the Russian atomic scientists and engineers that they did not know what their costs would be in producing power from atomic fuels. One reason is that atomic fuels come from other departments and these engineers did not know what they would be charged. They did say that they, as we, have found the costs higher than originally anticipated. Also, they stated that they expect their costs to be considerably higher than the cost of equivalent power made from conventional fuels. Any large-scale development of atomic powerplants in Russia will wait until such time as research and development enable the production of power from the atom at a cost competitive with conventional fuels.

WAGES

As we traveled from plant to plant we were able to ask many questions. Naturally we were interested in how the employee was faring under this planned economy, how much he earned, how much he could buy with his salary, how his life compared with that of an American worker in a similar job.

We found, for example, that a turbine operator in Russia earns about 1,200 rubles a month as a salary. At the average rate of 10 rubles to a dollar, this means that he is earning about $120 a month. In addition he could earn a bonus that would increase this to $140 to $160 a month. An American worker with the same sort of a job earns about three times as much. On the average the Russian worker receives about 800 rubles a month.

A graduate engineer receives about 2,500 rubles a month. The director of a plant receives 4,000 rubles or $400 a month. With bonus, his salary may be about $500 a month.

In appraising these wages it should be remembered that the rent paid to the Government, the owner of practically all housing, appears

to be low and possibly below the cost of furnishing the housing service. In this respect the low rent might be considered part of income. In America the average worker may pay something like 20 percent or 25 percent of his total income for housing. Also, taxes paid by the Russian worker appear to be somewhat less than taxes paid by the American worker. After taking all of these factors into account, it would appear that the average income of the Russian worker is something like one-third of the income of the American worker.

HOUSING

By our standards Russian housing is rather poor. However, it must be remembered that much housing was destroyed in World War II.

Today Russia has 79 square feet of housing per capita in urban areas. For a family of four this is 316 square feet. This is an area a little less than 18 feet by 18 feet. In America we have 370 feet per capita or, for a family of four, 1,480 square feet. This is an area about 38 by 38 feet.

Russia now has a program for expansion and betterment of housing facilities. Under the new housing plan a family of four will have 400 square feet of housing, or a square area of 20 feet by 20 feet. The family will share a kitchen and bath with one or two other families.

Lately individuals have been allowed the privilege of building a home in the country on their own.

ELECTRIC RATES

We did not obtain the prices of electricity to industry. We were told that the price covers the cost of making the power plus some margin. Since the Government owns the power facilities and the industry, the price is not of much significance.

The price of residential electricity is a flat 40 kopeks per kilowatt-hour. At 10 rubles per dollar, this is equivalent to 4 cents a kilowatt-hour for all use. In America we follow the practice of providing a sliding scale rate for all use of electricity. For residential service this may start in the neighborhod of 4 to 6 cents a kilowatt-hour and scale on down to 1½ to 2 cents a kilowatt-hour. The average price of all residential electricity in the United States is about 2.53 cents a kilowatt-hour.

EDUCATION

In the field of education it appears that the Russians have made considerable progress. We were told that some of the educators receive among the highest salaries paid in the U.S.S.R. Because of this there is a tendency for the more intelligent and more able people to move into the field of education and science.

High school students are given tests to measure their aptitudes and abilities. Those with abilities, intelligence, and good grades are then chosen by the state to go to college. Those chosen are paid while obtaining their higher education. When graduated they command a higher salary than those of less education. These incentives lead the students to strive for good grades so that they will be eligible for college. Education is taken seriously in Russia.

V. Evaluation of the Russian System

ELECTRIC POWER

In the field of electric power it appears that Russian production will be considerably behind that of America for at least as far as we can foresee in the future. This in some respects is a measure of the total industrial capacity of the two countries. Obviously a country with a lower productive capacity can concentrate on certain items and excel in these fields. This Russia has done.

WELFARE STATE ECONOMY

Russia has demonstrated, as other countries in history have demonstrated, that this system of government ownership and operation of the machinery of production can be made to work for a while. The people are employed and they appear contented with their system. It is the complete totalitarian state, the planned economy, the welfare state. Under the new regime in Russia the people have a great deal more freedom than they had previously, but their individual freedom is not at all comparable to the individual freedom enjoyed by the American. In Russia all wages are fixed by the Ministry of Finance. The workers do not bargain for their wages. They cannot strike when they are dissatisfied. The individual does not go into business for himself to make some new article which he thinks might be better than something now being made. There is no competition as there is in America. The individual has not the same incentive to save and to invest in the machinery of production in hope of a profit or reward for the use of his savings.

In America the individual has these freedoms and more.

THE ECONOMIC SYSTEM AND STANDARD OF LIVING

The whole problem relates back to the basic question, "How best can man raise his standard of living?" We here in America long ago adopted a system of freedom and market incentives. Let man do what he wants, as long as he respects the rights of others, and reward him as his efforts contribute to society's needs. Thus a man will seek to make his highest possible contribution to society, for that is where he will earn his highest possible reward.

Russia has seen how this system has worked for us, and is adopting our incentive system. Where the Soviet Union has applied these incentives, she has made her greatest progress.

Russian successes and failures

The Russians have been successful and competent in selected areas; in others, they have not done as well. Steel production is an area, for example, in which Russia has done well. Missiles and rockets represent another area of Soviet success. By contrast their record in agriculture has been a sorry one indeed. With five times as many people working on farms, Russia has a hard time feeding itself. Russia still has a severe housing problem, brought about in part by the devastation of World War II. These are but two areas in which Soviet performance is deficient. The Russians are working hard to correct this.

United States compared

By contrast, the United States is competent in many areas. We have a farm problem, but it is that 7 percent of our population can produce much more food than the rest of us can eat. Our industrial machinery is remarkably responsive to the needs and desires of the American people and Nation. In general we have fewer weak spots, economically speaking. Not only will the Soviet economy have to grow some to reach the standard of ours, but it will have to get more in balance if it is to show stability.

RUSSIAN GROWTH BY DECREE

Where the planners have decreed growth, there has been growth. The growth has not always been in the quantity ordered or of the best quality, but there has been growth. In a number of instances, Russian growth has been greater than ours when expressed in terms of percent increase. Much of this is due to the extreme low level of the starting point; some is due to the different state of development of the two economies; some is due to the manner in which growth can be engineered by the planners.

Many people feel that Russia is not likely to overtake us at all unless there is a substantial change in the ground rules. I am inclined to support this theory. I do not believe Russia will catch up with us unless Russia adopts the incentives and rewards of the free enterprise system, or we abandon that system.

Russia adopting our system

As pointed out we have noted a certain tendency in the Russian system to gravitate toward some of the principles that we employ, such as incentive wages, although we have noted no tendency toward the two-party system and free elections. On the other hand, many economists and students of political economy have noted a trend in America under which more and more Americans are calling upon their Government to do for them those things which traditionally Americans have done for themselves. As a consequence, we have witnessed an increased emphasis on Government spending, and Government taking care of people and Government entry into fields which traditionally have been carried on by individuals as such or in groups. If this trend continues, it is entirely possible that Americans, unwittingly perhaps, may gradually bring about a conversion of their system to one of Government operation of the economy. If this comes to pass, our productive capacity will level off and we will find that the system we have adopted, by its nature, results in a lower standard of living.

But in recent months we have seen evidence here in America of a swing in popular sentiment favoring less Government and more freedom. This is encouraging.

APPENDIX A

Hosts on 1958 visit to U.S.S.R. (all of Ministry of Power Stations):

A. S. Pavlenko, Minister of Power Stations.

D. G. Chizhov, Deputy Minister of Power Stations.

Nikolay P. Galochkin, Chief Engineer of the Foreign Department.

A. M. Nekrasov, Chief of Technical Department, Ministry of Power Stations.

Hosts on 1959 visit to U.S.S.R. (all of Ministry of Power Station Construction):

I. T. Novikov, Minister.
A. A. Belyakov, Department of Hydroelectric Power Construction.
A. U. Buchover, Secretary, Ministry of Construction of Power Stations.
A. E. Finogenov, Second Deputy Minister.
N. P. Galochkin, Chief Engineer, Department of Foreign Relations.
K. D. Lavrenenko, Deputy Minister.
F. B. Sapozhinikov, Chairman, Design Department.
N. A. Tarasov, Chairman of South and West Power Stations.
N. D. Veselov, Chief, Foreign Relations, MCPS.

APPENDIX B

ITINERARY IN THE U.S.S.R., AUGUST 14–30, 1958

August 14.—U.S. party was met at Vnukovo Airport in Moscow by Mr. Andrey M. Nekrasov, Chief of the Technical Department, and Mr. Nikolay Y. Galochkin, Chief Engineer of the Foreign Department, both of the Ministry of Power Stations, and other officials.

August 15.—Met with Mr. A. S. Pavlenko, Minister of Power Stations; Mr. D. G. Chizhov, Deputy Minister of Power Stations; Mr. A. M. Nekrasov.

August 16.—Visited Station No. 20 near Moscow—a thermal plant. Also visited Moscow Supply Center.

August 17.—Visited Suvorov thermal plant (station No. 19) in Cherepet, near Moscow.

August 18.—Visited the Moscow Research Institute.

August 19.—Visited Noginsk 400-kilovolt substation and the State Planning Commission (Gosplan).

August 20.—Visited the atomic powerplant (5,000 kilowatt) at Obinsk, outside Moscow.

August 21.—Visited the All Union Institute for Thermal Research (Moscow).

August 22.—Visited the Nuclear Research Center at Dubna, 120 kilometers outside Moscow. Also visited the Industrial and Agricultural Exhibit in Moscow.

August 23–24.—Visited Kuibyshev, a 2,300,000-kilowatt hydro plant which was 1,000 miles east and slightly south of Moscow.

August 25.—Stalingrad—group divided into two sections. First section visited the Dnepropetrovsk hydro plant on the Dnieper River. Second section visited the Stalingrad hydro plant.

August 26.—First section visited the Zaporozhskiy transformer works. Second section visited the Lugansk thermal plant in Stalino.

August 27.—Second section visited dispatching center at Garlovka, 60 kilometers out of Stalino.

August 28.—Party visited Leningrad metal works which produce thermal and hydro turbines. Also visited Electrosila, generator works in Leningrad.

August 29.—Final meeting with Ministry of Power in Moscow followed by dinner with Mr. A. S. Pavlenko, Minister of Power Stations.

August 30.—Party departed for either Copenhagen or Amsterdam in TU–104 Russian jet.

APPENDIX C

ITINERARY: 1959 TRIP TO RUSSIA

July 23.—Arrive Moscow.

July 24.—Dedication and opening of the American exhibit.

July 25.—Exhibition of U.S.S.R. national economy achievements.

July 26.—Arrive Irkutsk. Hydroelectric plant on the edge of Baikal Lake. Arrive Bratsk.

July 27.—Construction site of Bratsk hydroelectric plant. Arrive Novosibirsk.

July 28.—Hydroelectric plant and generator works at Novosibirsk. Arrive Stalinsk. Youzhno-Kuzbass thermal power station.

July 30.—Arrive Sverdlovsk. Beloyarsk atomic powerplant. Arrive Chelyabinsk.
July 31.—Youzhno-Uralsk thermal power station.
August 1.—Arrive Voronezh. Voronezh atomic powerplant.
August 2.—Arrive Yerevan.
August 3.—Hydroelectric plants of the Sevang-Razdan cascade.
August 4.—Arrive Moscow.

AN AGRICULTURAL VIEW OF THE SOVIET THREAT

(By Charles B. Shuman, president, American Farm Bureau Federation, Washington, D.C.)

In this paper we have chosen to use the terms "U.S.S.R." and "Soviet" in preference to "Russia" and "Russians" in most instances. This choice of words is based on a belief that the threat to the United States, which we are to discuss, is a threat that arises out of the Soviet system, whereas Russia is a geographic threat.

In evaluating the Soviet threat from the point of view of agriculture, comments will be made on—

I. Why the U.S.S.R. is a threat;
II. Agriculture in the United States and the U.S.S.R.;
III. Developing trends in Soviet international trade in farm products and
IV. Implications of Soviet economic offensive to U.S. policies.

This paper has been prepared in the light of Farm Bureau philosophy of government. This philosophy emphasizes the God-given liberties of every individual and the necessity of being alert to the destruction of individual freedom by the domination of government It recognizes that the centralization of power in the United States or any other area of the world is one of the greatest dangers faced by individuals. A statement of beliefs set forth in Farm Bureau's policy resolutions reads in part as follows:

> That the trend toward increased centralization of power in the Federal Government, if left unchecked, will lead to socialism and thus to communism.
>
> That such "planned economy" concepts as socialism, fascism, communism, and other forms of totalitarianism should be opposed wherever and in whatever form they may be found.

The Farm Bureau regards the U.S.S.R. as a threat because of (*a*) the nature of communism and (*b*) Communist desires for world domination. In evaluating this threat it must be recognized that communism involves a struggle to the death for men's minds, and a consequent danger that we might lose our freedom by unwittingly adopting Communist program bit by bit.

WHY THE U.S.S.R. IS A THREAT

The nature of communism

Marxism-Leninism, as practiced in the Soviet Union, is a collectivist, totalitarian, socialist police state, officially based on the following concepts:

(1) Atheism promoted by government, with religion and ethics being treated as something to be destroyed as "the opiate of the people."

(2) Government ownership and control of virtually all of the primary means of distribution and all means of production including

all property, homes, and land. (Since in the last analysis the most essential means of production is human beings, this means complete control of all humans.)

(3) Centralization in government of all power and authority over every aspect of life, which vests in a small group or individual the determination of all policy and transmits policy to the people through the single "political party" permitted to function.

(4) Morality consists of promoting communism, and any course of action which furthers this is moral.

(5) Communist concepts are to be extended by every feasible means to other peoples in all countries.

In addition to the above official concepts, the leaders of communism have specifically stated that it is a conspiracy to impose its will on the rest of the world by subversion, violence, deceit, legal and illegal means.

The writings of present-day Communists make it clear that the official religion of the U.S.S.R. is "worship of government." The conspiracy depends upon illusions of scientism and intellectualism, with its central thesis for the rest of the world being revolution, dissension, hatred, and the exploitation of misery and trouble.

Communism is a substitute for religion and a belief in the ultimate complete perfection of humans here on earth, compounded with the contradiction that individual freedom as a way of life will not work; it is a belief that government is far more capable of running your life than you are; it is a contention that if people are free to manage their own affairs, most of them will go hungry and be cold; it is a repudiation of the free market where willing buyers and willing sellers voluntarily arrive at prices agreeable to both; it is a false thesis that employers and employes belong to different classes and are natural enemies; it is a process whereby some people use the power of government to make other people conform to their views and desires; it is a coerced debasement of the intelligence and integrity and dignity of the individual human being who must bow his head in deference to the views of political masters; it substitutes for the present owners of property a "new class," i.e., the government functionaries, who have the beneficial use of the expropriated property; it is a throwback to a system of tyrannical power over individuals—a system wholly repudiated by our Founding Fathers in the early days of this free Republic. It is the ultimate in concentration of political power and represents naked government force at its worst.

Communist desires for world domination

(1) The evidence of the desire of the Communists to dominate the world is cumulative from the Communist Manifesto of 1848 down to the current day. In the Communist manifesto the following appears:

> In short, the Communists everywhere support every revolutionary movement against the existing social and political order of things * * * they openly declare that their ends can be attained only by the forcible overthrow of all existing social conditions. Let the ruling classes tremble at a Communist revolution. The proletarians have nothing to lose but their chains. They have a world to win. Working men of all countries unite.[1]

[1] Karl Marx and Frederick Engels, vol. I, Foreign Languages Publishing House, Moscow, 1951, p. 61.

(2) Lenin persistently carried forward the idea of world revolution and world domination. The following is a typical example of his thinking:

The victorious proletariat of that country, having expropriated the capitalists and organized its own socialist production, would rise against the rest of the capitalist world, atract to itself the oppressed classes of other countries, raise revolts among them against the capitalists, and in the event of necessity come out even with armed forces against the exploiting classes and their states.[3]

(3) Stalin sounded the same note in numerous works from which the following is one example:

Lenin never regarded the Republic of the Soviets as an end in itself. To him it was always a link needed to strengthen the chain of the revolutionary movement in the countries of the West and East, a link needed to facilitate the victory of the working people of the whole world over capitalism. Lenin knew that this was the only right conception both from the international standpoint and the standpoint of preserving the Soviet Republic itself.[3]

(4) Even though Khrushchev has castigated Stalin, he makes it clear that he and the Communists are following Marx and Lenin in an effort to obtain world domination. An example of his statements follows:

If anyone thinks we shall forget about Marx, Engels, and Lenin, he is mistaken. This will happen when shrimps learn to whistle.[4]

(5) Those who think we can trust the Russian leadership to peacefully coexist with us should seriously consider the following statements of Lenin, Stalin, and Khrushchev.

We are living not merely in a state, but in a system of states and the existence of the Soviet Republic side by side with imperialist states for a long time is unthinkable. One or the other must triumph in the end. And before that end supervenes, a series of frightful collisions between the Soviet Republic and the bourgeois states will be inevitable.[5]

But as soon as we are strong enough to defeat capitalism as a whole we shall immediately take it by the scruff of the neck.[6]

Who will conquer whom? That is the whole question * * * the world is divided into two camps—the capitalist camp, headed by Anglo-American capital, and the Socialist camp, headed by the Soviet Union. The international situation, therefore, will be more and more determined by the correspondence of forces between these two camps. * * *[7]

Whether you like it or not, history is on our side. We will bury you.[8]

As long as capitalism and socialism exist, we cannot live in peace; in the end, one or the other will triumph—a funeral dirge will be sung over the Soviet Republic or over world capitalism.[9]

The struggle for men's minds

The conflict with communism is a conflict of opposing ideologies; consequently, it is a struggle for men's minds. In such a struggle the continued existence of either ideology is an actual or potential threat to the continued existence of the other.

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[3] V. I. Lenin, "The United States of Europe Slogan" (1915), "Selected Works," International Publishers, New York, 1943, vol. V, p. 141.
[3] Joseph Stalin, "On the Death of Lenin" (Jan. 26, 1924; Pravda, Jan. 30, 1924).
[4] "International Affairs," Moscow, January 1956, p. 2.
[5] Joseph Stalin, "Problems of Leninism" (Foreign Languages Publishing House, Moscow, 1953), pp. 192–193.
[6] V. I. Lenin, "Speech to Moscow Party Nuclei Secretaries" (Nov. 26, 1920), "Selected Works" (International Publishers, New York, 1943), vol. VIII, p. 282.
[7] J. Stalin, "Results of the Work of the XIV Conference of the RKP (B)," May 9, 1925, Sochineniya (Gospolitizdat, Moscow, 1947), vol. 7, pp. 95–98.
[8] Nikita S. Khrushchev at Kremlin reception, Nov. 17, 1956 (Time, Nov. 26, 1956).
[9] Lenin, "Speech to Moscow Party Nuclei Secretaries" (Nov. 28, 1920), "Selected Works" (International Publishers, New York, 1943), vol. VIII, p. 297.

Western civilization is based on Judeo-Christian ethics such as those expressed in the Ten Commandments and the Sermon on the Mount. In the ethics of Western civilization, truth is of transcendent importance. The Communist brand of tyranny (like fascism under Mussolini and state socialism under Hitler) cannot permit truth as we know it to exist.

Christian ethics are grounded in the belief that certain fundamental truths are permanent and fixed. On the other hand, the Communists, and Socialists who vigorously insist they are anti-Communists, both generally take the point of view that there are no absolute, unchanging truths. Lenin, for example, commenting on the ideas of Marx and Engels, wrote:

> For dialectical philosophy nothing is final, absolute, sacred. It reveals the transitory character of everything and in everything; nothing can endure before it except the uninterrupted process of becoming and of passing away, of endless ascendency from the lower to the higher. And dialectical philosophy itself is nothing more than the mere reflection of this process in the thinking brain.

The Communists and the Socialists contend that "the end justifies the means." The Communists treat the truth not as something sacred or to be revered in itself, but merely as a tool of the party to get on with the work of the revolution.

Once the unsuspecting person accepts the philosophy that there are no absolute truths he is lost, and from that point onward is an easy prey to the propaganda of the skillful Socialist.

The Communists cannot permit the existence of the idea that the individual is made in the image of God and obtains unalienable rights from the Deity. Such an idea presupposes a power greater than that of the state.

The danger that we might lose the struggle by unwittingly copying the Communist program bit by bit

Everyone who cares earnestly about freedom is aroused against communism. But it is not only the Communists, it is in a more subtle way the Socialists, who are pushing the free world (including the United States) toward the excessive centralization of power in government. This is the road to totalitarianism. It is difficult in a brief paper to fully explore the means by which the Communists and Socialists are weakening the United States by boring from within. One of the real problems is that many people who have no intention of helping to destroy our system and bring about the "new economic order" advocated by the Communists and Socialists, are nevertheless unwittingly doing so.

The average American citizen, and for that matter many of our best-informed citizens, appears to be unable to relate day-to-day instances occurring here in the United States to the combined Socialist-Communist conspiracy. This inability to understand the Socialist-Communist conspiracy in operation here may be due to a lack of knowledge concerning—

(1) The objectives and goals of communism and the objectives and goals of Fabian socialism, which in many instances are one and the same;

(2) Similarities of the pattern of attack that the Socialists and Communists are making on our institutions by such actions as interfering with the free choices of buyers and sellers;

(3) "Lack of a thorough understanding of the moral and political basis of the system that has made the United States the envy and standard of comparison throughout the world"; [10] or,

(4) The direct personal interest of some individuals, and the less personal interest of well-meaning planners and reformers, in the diversion of money from those who earn it to those who do not.

For most of the last 4 decades a gradual change has been occurring in our economic system. This change has been brought about by many small steps, but the cumulative effect has been a long step away from the morally and economically sound concept of individual responsibility to the immoral and economically unsound concept of government responsibility.

In order to understand the situation, not only must we understand the moral and political rightness of our basic system of free choice, but it is necessary to study the literature of the Communists and the Socialists to see how they bring their schemes into effect. In other words, it is necessary to know our enemy. If a person will examine the situation thoroughly, he will finally see the pattern of conspiracy shining through day-to-day programs that are being advanced in the United States. This examination will also reveal how the activities of Socialists, who are looked upon by many as respectable, intertwine and reenforce the program of the Communists, who are generally considered disreputable.

The House Committee on Un-American Activities published a series of five reports under the heading "Communist Conspiracy—Strategy and Techniques of World Communism." If a person will familiarize himself with this information, he will be well armed to understand how the Communist conspiracy is being advanced throughout the world.

Marx was not sincerely interested in reforms as such, but proposed to use campaigns for reform measures in order to push non-Communists step by step "to the extreme" and ultimately to actual ruin.

> At the beginning of the movement, of course, the workers cannot yet propose any directly Communist measures. But they can: (1) Compel the democrats to interfere in as many spheres as possible of the existing social order, to disturb its regular course, and to compromise themselves, as well as to concentrate the utmost possible productive forces, means of transport, factories, railways in the hands of the state; (2) they must drive the proposals of the democrats, who in any case will not act in a revolutionary but in a merely reformist manner, to the extreme and transform them into direct attacks against private property * * * If the democrats propose proportional taxes, the workers must demand progressive taxes; if the democrats themselves put forward a moderate progressive tax, the workers must insist on a tax with rates which rise so steeply that large-scale capital is ruined by it; if the democrats demand the regulation of state debts, the workers demand state bankruptcy * * * [11]

What makes the problem exceedingly difficult is that the goal of the Socialist is generally the same as the Communist, namely, the elimination of both the private ownership of property and the impersonal distribution of goods and services by free choice in the market. Of course,

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[10] London Economist, Aug. 15, 1959, p. 409.

[11] Karl Marx, "Address of the Central Council to the Communist League," London, March 1850, Karl Marx, "Selected Works," vol. II (Cooperative Publishing Society of Foreign Workers in the U.S.S.R., Moscow, Leningrad, 1936), pp. 167–168. Reported in "Contradictions in Communism."

the Socialist advocates the transfer of control of private property to or by the government by gradual legal means, while the Communist advocates the same thing through violent revolution.

Prof. G. D. N. Cole, a leading British Socialist, writes in the Encyclopaedia Britannica as follows:

> The distinction between socialism, as represented by the various Socialist and Labor Parties of Europe and the New World and communism, as represented by the Russians and the minority groups in other countries, is one of tactics and strategy rather than of objective. Communism is indeed only socialism pursued by revolutionary means and making its revolutionary method a canon of faith.

In other words, the Socialists admit that the goals of the Communists and the Socialists are the same.

One of the schemes that the Communists use to convince people that they should give up their individual rights and turn them over to the Government is the argument that as civilization becomes more complicated, the more restricted must be the freedom of the individual. The argument for totalitarianism is basically the same. For example, Mussolini said:

> We were the first to assert the more complicated the forms assumed by civilization the more restricted the freedom of the individual must become.

The unforeseen but inevitable consequences of socialism create a state of affairs which if pursued will enable totalitarian forces to get the upper hand.

The essential point is that bit by bit and little by little we can gradually destroy here in the United States the freedom of the individual in return for illusory promises that individuals will gain greater personal security by abdicating their responsibilities to an all-powerful Federal Government.

The men who established our constitutional system here in this country thoroughly understood that tyranny was the result of centralization of power in the hands of the state.

Franklin is quoted as having said:

> Those who would give up essential liberty to purchase a little temporary safety deserve neither liberty nor safety.

The whole theory of limited government is threatened by those who think that the essential problem to be resolved today is redistribution of the wealth by the Federal Government, taxing those who have earned it—distributing to those who have not earned it.

The appropriate attitude for U.S. policymakers to take toward the U.S.S.R.

In view of the nature of communism; the announced desire of the Communists for world domination; the clear record of Communist duplicity; and the irreconcilable nature of the conflict between communism and a philosophy that stresses freedom and the worth of the individual; U.S. policymakers should regard the U.S.S.R. as an enemy which is waging a form of total war against us and all free people of the world. The record is clear that Communist promises cannot be relied upon. Under the Soviet system every transaction is subject to Government policy. The Soviets are not interested in developing trade or other relations with other countries on a normal basis, but only on a basis that will advance Communist objectives.

Communism and socialism are forms of deadly infection that must be fought externally and internally. This does not mean that we should seek to avoid all contacts with the Soviets, but it does mean that we should constantly be on the alert to safeguard our own interests. We must know the mainsprings of our own strength—improve and guard them—through our schools, churches, public institutions. To drop our guard would be fatal. Trying to do business with Hitler enslaved Germans, betrayed others who tried to appease him, and ended in the most devastating war in history. Trying to appease the Communists would also lead to disaster.

SOME OBSERVATIONS ON AGRICULTURE IN THE UNITED STATES AND THE U.S.S.R.

Any effort to compare American and Soviet agriculture is fraught with difficulty and also with the dangers of oversimplifying or creating misleading impressions. Soviet statistics are incomplete and often of questionable reliability. Official Soviet reports are colored by propaganda and boasts of things that are yet to be accomplished. The reports of U.S. visitors to the Soviet Union generally are based on limited observations in a vast country, where economic, social, and climatic conditions compound the difficulty of making valid comparisons with the situation that exists in the United States. Furthermore, the conditions that now exist and the statistical record of the past do not necessarily provide a valid basis for appraising future potentials.

In spite of these limitations, a few general observations appear to be in order.

The outstanding difference between American and Soviet agriculture is the fact that our agriculture is characterized by independent, family-type units operating under a private, competitive enterprise system, while Soviet agriculture is characterized by collectives and state farms operating under a centralized system of bureaucratic planning.

The major problem of Soviet agriculture is to increase production to provide a better diet for an expanding population and a surplus that can be exported to acquire needed foreign products and exchange. In the United States we are plagued with surpluses because agricultural production has been expanding more rapidly than effective domestic and foreign demand. While our present agricultural surpluses are largely a result of governmental policies that have stimulated the flow of capital into agriculture and have retarded needed adjustments, they are nonetheless an indication, not only of the present productive ability of American agriculture, but also of our capacity to expand agricultural production. Present trends suggest that the day when the United States will have to worry about its capacity to produce farm products is far in the future. The Soviets apparently have been increasing agricultural production at a rapid rate in recent years, and it seems clear that their potential for further expansion is substantial—particularly for some products.

Agricultural resources [12]

Both the United States and the U.S.S.R. have very great natural resources for agricultural production; however, we have some definite advantages in this area.

* * * more than 70 percent of the total area of the Soviet Union is nonagricultural as compared with an estimated 42 percent for continental United States.

Despite this high percentage of nonagricultural land, the Soviet Union, with a land mass three times that of the continental United States, has a very large acreage that is suitable for agricultural purposes.

The area sown to crops in the U.S.S.R. is reported to have increased from 371.6 million acres in 1940, to 410.5 million in 1954, and 483.1 million in 1958. A part of this increase, of course, reflects territorial changes. By way of comparison, the U.S. Department of Agriculture estimates that the total cropland available for crops in this country in 1954 was 465 million acres. Acres of cropland are not necessarily a good measure of agricultural potential as soil, topography, climate, technology, and the availability of new land that can be brought into production through drainage and irrigation are also important.

Soil scientists have reported that the U.S.S.R. has great soil resources and that much of the land now under cultivation has a high natural fertility.

Adverse climatic conditions are the most serious natural handicap faced by Soviet agriculture. This reflects the northern location of the U.S.S.R. and other geographical factors, such as the size of the Soviet land mass and the location of mountains which affect rainfall.

The southernmost point in the Soviet Union is in the same latitude as Memphis, Tenn., and Albuquerque, N. Mex.

* * * Yalta, at the southern tip of the Crimea, is approximately in the same latitude as Rochester, Minn.; and Odessa, on the Black Sea, is in the same latitude as Duluth, Minn.

Important Soviet cotton areas are located in approximately the same latitude as Chicago.[13]

* * * the crucial disadvantage of the continental Russian climate is the inverse relationship in the distribution of heat and moisture, both of which are essential for plant life. As the amount of heat increases, from north to south and west to east, moisture tends to diminish and the maximum of heat is accompanied by a minimum of moisture.

There are, of course, local exceptions to the above generalization. Where water is available and other conditions are favorable, the absence of adequate rainfall can be overcome by irrigation. The Soviets have a large irrigated acreage which they probably can expand to a considerable extent if they are willing to make the necessary capital investment. The entire Soviet cotton crop is produced on irrigated land, and irrigation is being expanded in the cotton areas.

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[12] The comments on the agricultural resources of the United States and the U.S.S.R. which are set forth in this section are based on information from many sources; however, heaviest use has been made of a bulletin entitled, "Economic Aspects of Soviet Agriculture, Report of a Technical Study Group," published by the Agricultural Research Service of the U.S. Department of Agriculture in May 1959. Except as otherwise indicated, all direct quotations relative to the U.S.S.R.'s agricultural resources are from this pamphlet.

[13] "Cotton in Russia," Leonard A. Mobley, Foreign Trade Division, National Cotton Council, p. 7.

This suggests that the Soviets have a substantial potential for the expansion of cotton production, although irrigated land is also used to produce sugar beets and other crops.

In the western and north-central European areas of U.S.S.R., a considerable acreage of marshland and swamps can be reclaimed and turned to productive use, as meadows, pasture, and cropland. Indications are, however, that reclamation operations are proceeding slowly, and sometimes with a subsequent considerable gap in the utilization of the reclaimed land.

Much of the expansion that has taken place in recent years in the area seeded to crops in the Soviet Union has been in the so-called new lands in central Asia and western Siberia. These lands are subject to wide variations in rainfall, and it remains to be seen whether they can be kept in production over an extended period of time.

It has been suggested both that cropping of the new lands may lead to a "dust bowl" problem, and that the possibility of retaining these lands in production could be increased by adoption of the summer fallow system, which is used in some of the dry land areas of the United States.

In the past, the Soviet diet has leaned heavily on cereals, potatoes, and other vegetables that are grown in household gardens.

Soviet leaders have announced ambitious plans for the expansion of meat production; however, the agricultural resources of the Soviet Union are better adapted to the production of food grains than to the production of the feed grains that are essential for meat production. In recent years the Soviets have made a considerable effort to expand corn production; however, a large part of their corn crop is harvested for silage and green feed, rather than grain. This reflects the fact that climatic conditions are unsuitable for the production of ripe corn in large areas of the U.S.S.R.

While steps can be taken to expand feed production, the adjustments necessary to accomplish this may require considerable time. In the meantime population growth will increase the production needed to maintain present diets.

The following table indicates the gaps that now exist between the per capita production of some important livestock products in the United States and the U.S.S.R. It will be noted that the United States is far ahead on meat, poultry, and eggs, and slightly ahead on factory butter. The significance of the factory butter comparison is reduced by the much heavier consumption of competing fats in the United States.

Comparison of per capita production of meat, eggs, wool, and butter in the Soviet Union and United States, 1956 [1]

	Soviet Union	United States
Livestock and poultry slaughtered, live weight.....pounds..	117 9	345.7
Meat production, including poultry, dressed weight.....do....	72.9	214.9
Beef and veal, dressed weight.....do....	26.0	96.1
Pork, including lard, dressed weight.....do....	29.5	83.6
Lamb, mutton, and goat meat, dressed weight.....do....	9.0	4.4
Poultry meat, dressed weight.....do....	8.5	31.0
Egg production, number of eggs.....do....	97.4	392.2
Wool production.....pounds..	2.87	1.67
Factory butter production.....do....	6.1	8.4

[1] Derived from data published in "Economic Aspects of Soviet Agriculture, Report of a Technical Study Group," Agricultural Research Service, U.S. Department of Agriculture, May 1959, p. 26.

Since it takes more resources to produce meat than cereals, it would appear that Soviet income levels will have to rise if the average Soviet citizen is to be able to afford a higher level of meat consumption.

Dairying is the most advanced livestock enterprise in the Soviet Union. In 1957, production per cow was reported as averaging about 4,000 pounds, in comparison with a U.S. average of 6,162 pounds. Total Soviet milk production, including 4½ billion pounds from sheep and goats, was reported as 121 billion pounds in 1957, in comparison with a U.S. production of 126 billion pounds.

Inadequate transportation apparently limits the marketing of whole milk.

> * * * outside the radius of large cities, all milk is separated into cream on the farm. The cream is then hauled to a creamery and the skim milk is fed to hogs on the farm. This system is identical with that which prevailed in the United States 30 years ago. It is wasteful of milk solids other than fat—a serious waste in a nation that needs to put more animal proteins into its high cereal diet.

In this connection it probably should be noted that, while we have gone a long way toward developing a marketing system for whole milk, this—plus our dairy price-support program—has resulted in a burdensome surplus of nonfat milk solids.

Other factors affecting agricultural production

Although important, natural resources are only one of the factors that affect a nation's capacity to produce farm products. It has been said that resources are a function of human knowledge. Stated another way: "Technology is our primary resource. Without it, all other resources would be economically nonexistent." [14]

This is true in agriculture as well as in industry. At the present time the United States appears to be far ahead of the U.S.S.R. in agricultural technology. The present advanced stage of our agricultural technology reflects the results of years of public and private research, widespread educational programs including specialized programs to spread the knowledge of scientific agriculture, and a private enterprise system which stimulates individual initiative. American agriculture also has benefited a great deal from progress in other sectors of the economy. For example, it takes a great deal more than a capacity to produce farm products to make a high quality diet available to millions of urban consumers in a large country such as the United States or the U.S.S.R. A highly complex industrial system is also necessary to process, package, transport, store, and distribute farm products. As has already been pointed out with respect to milk, Soviet agriculture apparently is handicapped by inadequate facilities for refrigeration, transportation, and distribution of perishable products.

An important contributing factor to the economic growth of the United States has been the fact that the increasing productivity of American farmers has made it possible for a smaller and smaller percentage of our total population to produce needed farm products. In other words, the advance of agricultural technology in the United States has released labor for industrial and service activities. In this

[14] J. F. Dewhurst, "America's Needs and Resources," quoted by Yale Brozen of the University of Chicago in a paper presented to the Sixth Conference on Scientific Manpower, Indianapolis, Ind., December 1957.

respect we are now far ahead of the Soviets. It has been estimated that 43 percent of Soviet population is engaged in agriculture. In the United States the farm population is estimated to be 12 percent of total population; however, U.S. statistics on farm population include a very sizable number of people who live on residential, or subsistence units, that produce little or nothing for sale.

The large percentage of the Soviet work force which is now engaged in agriculture means that the Soviets have a very great potential for strengthening their economy by improving efficiency in agriculture and, thereby, releasing labor for other activities.

One observer has gone so far as to say that—

> * * * the possession of knowledge by the Russians which enables them to build an ICBM may be less fearful than the development of higher productivity in the agricultural sector of their economy. When we furnish hybrid seed and models of agricultural machinery to the Russians, a graver threat to security is involved than open publication of atomic secrets. If manpower requirements in Russian agriculture were reduced as radically as they have been in American agriculture, the release of resources to the military and to armaments production would make Russia a far graver threat than she now is.[15]

There is no question but what progress in agriculture which enabled the Soviets to reduce the percentage of their labor force that is required to maintain a desired level of farm production would strengthen the U.S.S.R. There is, however, little that we can do to prevent the Soviets from obtaining technical agricultural information either from the United States or from other advanced countries. There are very few trade secrets in agriculture. The important thing in regard to hybrid corn is not the seed itself, but the technology that is used to produce it. Seed that has been developed for use in the United States may do very poorly under Soviet conditions; however, the technology that is used to produce hybrid seed can be used by the Soviets to develop varieties that would be better adapted to their conditions. The principles back of hybrid seed and many other technological advances in agriculture are widely known and freely available in published literature.

The advantages of an incentive system

From a long-run standpoint, our greatest advantage over the Soviets in agriculture, as well as in other fields, is not to be found in natural resources or technology, but in the fact that we have an incentive system, while the Soviets have a planned economy. Under our system every individual farmer has an economic incentive to improve his utilization of available resources. The individual farmer must constantly improve his efficiency in order to survive competition in a period of rapidly changing technology. The great profusion of consumer goods available in the United States makes it clear that the individual can improve his living standards by increasing his efficiency. This is not always clear in the U.S.S.R., not only because the planners may decide otherwise, but also because of the limited availability of consumer goods.

The Soviets have recognized the need for individual incentives to a degree, but collective farmers and employees of state farms cannot possibly have either the opportunity to exercise individual initiative

[15] Yale Brozen of the University of Chicago, op. cit.

or the incentive to improve efficiency that the individual farm operator has under our system.

Competition and the incentive system also stimulate industrial developments which enable farmers to reduce costs and expand output.

Centralized planning can produce spectacular results in individual undertakings, but it cannot mobilize the total energies and abilities of individual citizens as effectively as an incentive system. In a market system the mistakes of individuals tend to cancel out with little effect on overall progress of the economy, but when the planners make a mistake in a planned economy, the result may be nationwide and disastrous.

The Soviets have challenged us to war on the economic front. As we ponder the meaning of this challenge, it is well to remember that economics is the science which deals with the utilization of scarce resources. The economic strength of a nation depends not only on its resources, but also on the ways in which these resources are utilized. The Soviets probably are capable of making some spectacular advances in agriculture as they have in other fields, such as space satellites, but such advances will not necessarily represent an efficient utilization of scarce resources. Consequently, they will not necessarily add to the long-run strength of the Soviet system. For example, marginal land can be brought into cultivation through costly irrigation and drainage projects, and crops can be seeded in areas which are ill adapted to their production, but these practices do not necessarily represent an economic use of scarce resources. Projects that are not economic reduce rather than increase the strength of an economic system.

Despite the limitations inherent in a planned economy, the Soviets have a great potential for increasing the productivity of their agricultural workers. If we are to maintain the margin of advantage which the United States now has over the U.S.S.R. by reason of the greater productivity of our agricultural workers, we must avoid hamstringing the further growth and development of American agriculture. This means that we must avoid policies that substitute Government planning for the operation of an incentive system and policies that attempt to freeze farming in a rigid historical mold, or otherwise prevent needed adjustments in the resources (including human resources) devoted to agriculture. This can be accomplished by moving away from Government programs that attempt to fix prices and allocate the right to produce farm products, and by allowing increased opportunity for market prices to help to guide production and consumption.

Although a market system does not always work as smoothly and as painlessly as we might wish, it is still the most efficient system that has ever been developed for determining what things are really worth and how scarce resources can best be used. There have been many cases in this country in which the Federal Government has interfered with the operation of the market system, with a resulting waste of resources, but we are still able to evaluate the results of Government intervention on the basis of values established by a market system which covers most of our economic activities. The problem of allocating scarce resources on an efficient basis is far greater in a country where there is no market system and where all basic economic decisions must be made by a planning bureaucracy.

Significance of possible Soviet progress in agriculture

The present and potential productivity of Soviet agriculture suggests that Soviets can meet their basic needs for agricultural products even with an expanding population, but that they will have great difficulty in providing their people with a diet of the quality that is now available to American consumers in the foreseeable future. Self-sufficiency in agriculture has been an advantage to warring countries in the past when prolonged hostilities have sometimes shut off outside supplies. The importance of self-sufficiency in agriculture in case of an atomic war, which might result in great devastation in a short time, is open to question.

Assuming that it is the intention of the Soviet Union to continue the cold war without provoking a full-scale shooting war, the future progress of Soviet agriculture is of concern to us primarily from the standpoint of its potential impact (1) on the Soviet economy, which has already been discussed, and (2) on international trade in farm products.

The fact that the Soviets have some very definite limitations in agriculture creates a basis for trade with the so-called underdeveloped countries—many of which have exportable supplies of agricultural products. This can create some problems for the United States, particularly in cases where other countries feel that our surplus disposal policies are reducing their access to free world markets.

From the standpoint of U.S. farmers, a matter of important concern is the prospect of increasing Communist competition in the international market for some of our major agricultural commodities.

This will be discussed in the following section of this statement on the basis of information received from the Farm Bureau foreign trade office at Rotterdam, Netherlands.

DEVELOPING TRENDS IN SOVIET INTERNATIONAL TRADE IN FARM PRODUCTS

During the last few years the Soviet Union has moved into a leading position as an exporter of grains, principally wheat. It must be remembered, when attempting to assess the trend of Soviet trade in farm products, that Russia was one of the principal exporters of wheat during the period prior to World War I. Russian wheat exports, including flour, reached an average of 165 million bushels per year during the 1910–14 period. For many years following the Soviet takeover Russian exports were a negligible factor in the world wheat trade; however, in 1957 and 1958, Soviet shipments of wheat moved up to aroundt 150 million bushels. Thus, after about 40 years of Soviet rule, Russian wheat exports are again reaching the high volume attained during the early nineteen hundreds.

The Soviets need foreign exchange. Wheat exports bring exchange when sold for cash and needed goods under barter arrangements. During the last few years the Soviets have also been active in exporting oats, barley and, to a lesser extent, corn. Much of the corn, however, has been of Bessarabian or Rumanian origin.

Responsible observers in the European grain market uniformly are at a loss to forecast future Soviet exports with any real hope of accuracy. The Soviets have an expanding population which must be fed. They have made a definite and, to a certain extent, successful

effort to stimulate production. Accordingly, output at current levels has greatly increased available supplies. The quantity of Soviet wheat and feed grains which may at any given time flow into European or other markets is largely a matter of U.S.S.R. Government policy; therefore, any attempt to forecast such exports as firm annual figures is wishful thinking.

The cold, clear fact remains that production has increased rapidly, largely as a result of some good harvests and the development of new lands east of the Volga River and Ural Mountains. With these increased supplies the Soviet Union possesses the means to seriously disrupt the European market, or for that matter, the world market whenever she so wishes—assuming a normal harvest in that year.

Soviet wheat exports to Western Europe

In the past 2 years the Soviets have sold wheat to France, the Netherlands, Norway, Sweden, Austria, the United Kingdom, Denmark, and Belgium. They have disrupted U.S. sales in one important European country this year. As an example of what can be done by the Soviets, let us examine what has happened in the Netherlands. To a lesser extent it has also happened in other Western European countries.

The Netherlands has been a traditional market for American and Canadian wheat. Soviet exports to the Netherlands have been unimportant. In 1957, the U.S.S.R. moved about 2,000 metric tons to the Netherlands. In 1958, the total increased to 5,000 tons. On the basis of the record for the first 6 months of 1959, the Farm Bureau Foreign Trade Office estimates that the U.S.S.R. may move as much as 300,000 metric tons of wheat to the Netherlands this year along with a substantial amount of feed grains. These sales represent lost markets for American farmers and also for our competitors in such countries as Canada and Argentina.

In the fall of 1958, a group of Dutch wheat importers began negotiating seriously with the Soviet trade mission in Amsterdam.[16] After negotiations, sales were finalized. Soviet wheat began to arrive in substantial amounts by around the first of the year. Dutch bakers began to plan mixing and baking schedules for Soviet grain. Quality was reported to be irregular, but satisfactory. Farinograph reports indicated that the Soviet wheat was somewhat easier to work than U.S. wheat. It was comparable to a mixture of American Red and Hard wheats.

No accurate information is available as to the prices that were paid for the Soviet wheat—the data are still a closely guarded trade secret. Published Soviet wheat prices usually ride only slightly below CCC quotations; however, the consensus is that the sales to the Netherlands were barter transactions involving coffee from Brazil, German steel (through Dutch intermediaries), nylon, chemicals, and hides. It is reported that, in addition to the prices established for Soviet wheat in the barter transactions, premiums or bonuses (as much as 6 percent) were paid for the coffee, steel, nylon, and so forth. These premiums allegedly were "kicked back" to exporters, who in turn allowed

[16] Soviet missions are spread all over Western Europe and are located in Belgium, Luxembourg, France, Italy, the United Kingdom, Denmark, Norway, and West Germany. It is understoon that these missions have a loose, but official tieup with Soviet Embassies, and that the chief of the mission reports directly to the Ambassador.

the importers of the Soviet wheat part or all of the premium. The effect of such transactions is to move wheat at prices below existing world market levels.

The Canadians have sold wheat to the Soviets[17] (reportedly for credit), only to have their customers turn around and export substantial quantities of wheat to Western Europe. It can be argued that the Russians import hard Manitoba varieties and export softer varieties to Western Europe, and that one does not displace the other. Indications are, however, that "wheat is wheat" as far as the Soviets are concerned.[18] They are perfectly willing to sacrifice optimum bread-mixing formulas to accomplish other objectives. The Canadian wheat has, in part, enabled the Soviets to accomplish three important objectives:

(1) Conserve rail transportation which would have been required to move Ukrainian wheat to the eastern parts of the Soviet Union (Canadian wheat arrives at Pacific ports);

(2) Displace corresponding quantities of American and Canadian wheat in Western European markets; and

(3) Establish direct contacts with Western European business interests, which obviously is valuable to them, for political and economic reasons.

The problems created by increasing Soviet sales in international markets cannot be solved by criticizing Western European participation in such transactions.

Obviously not all Western European business interests relish trading with the Communists, but they have little choice as long as their competitors are free to do business with the Communists, and to obtain attractive terms. It is imperative that our farmers, the grain trade, and the U.S. Government clearly understand what is going on, and the need to compete vigorously in the European market.

European criticism of Public Law 480

There has been no little criticism by European importers of the Public Law 480 program and U.S. barter programs. The Dutch importers who purchased Soviet wheat (but who might have purchased American wheat) are willing and able to buy wheat with dollars; but they question the wisdom of paying with dollars when the United States is offering such vast amounts of wheat for local currencies of very limited value. What disturbs them even more is the negotiation of U.S. barter transactions at, to quote directly, "absurdly low prices." For example, it was reported by the Dutch trade that last year Sweden, a dollar-rich country, paid $64.60 per ton for U.S. spring wheat under a barter arrangement, while the Dutch would have had to pay $67.50 for a similar quality. This simply does not make sense to many European traders. They do not understand why they cannot get the best deal pricewise for cash payments rather than through complicated barter transactions. If they cannot get the best deal pricewise for cash payments in dollars, cash purchases with dollars cease to be a preferred way of doing business.

There also have been persistent, although unconfirmed rumors, that shipments of surplus U.S. commodities have crossed back and forth

[17] Under a 3-year pact which ended earlier this year, the Russians agreed to buy a minimum of 14.8 million bushels a year for 3 years from Canada.

[18] Canadian wheat reportedly was offered to Dutch traders by Poland last winter.

through the Iron Curtain. In some cases such movements would violate Public Law 480 agreements; however, these cases are extremely difficult, if not impossible, to confirm. It is clear, however, that commodities exported under Public Law 480 can reduce dollar sales. For example, German trade reports indicate that immediately following the announcement of a Public Law 480 sale of U.S. soybean oil to Poland, the Poles offered to sell lard in West Germany. Any such sales would displace U.S. lard which was being sold for dollars.

The United States must be prepared to compete

The situation can be summed up as follows: The U.S.S.R. is making a considerable effort and probably will make a greater effort to establish permanent cash markets in European importing countries. It must also be recognized by the United States that the first trial shipment of Soviet wheat to Japan was announced recently, and that some gift wheat has gone to the Middle East. Therefore, the United States must be alert to competition in other markets besides Europe.

The U.S.S.R. is increasing production of wheat. A substantial part of the increase that has already taken place in Soviet wheat exports has gone to satellite countries. It is unlikely that the requirements of the satellite countries will increase—they probably will decrease somewhat. Therefore, we should be prepared for a substantial rise in Soviet wheat exports to the free world. Such exports apparently reached the 35- to 40-million-bushel level in 1958–59. Whether or not they go higher depends in large degree on a basic Soviet policy decision; namely, how much emphasis to put on the expansion of feed production in order to make possible an enlarged livestock industry. This could be an important limitation on future wheat production and exports.

Future Soviet trade policies regarding cotton are uncertain. Cotton export and import levels can be altered at ease without regard to basic economic factors. If deemed essential by Soviet leaders, cotton production probably could be increased faster than consumption so as to provide an exportable surplus. It is also important to note that the Soviets undoubtedly will realize some increases in yields because of technological improvements (as we have done).

Soviet trade policy in farm commodities is tied to an extent with the export policies of Communist China. Needless to say, government policies are all important and are the overriding factors with China, as well as with the Soviet Union.

European oil crusher contacts reveal that soybeans from the Manchuria area are becoming increasingly popular in Western Europe. The best beans consistently yield as high as 18½ percent oil, and have a very low "foreign matter" content, often down to one-fourth of 1 percent.

It must be noted that Red China's exports of soybeans increased from about 700,000 metric tons in 1957 to an estimated 990,000 tons in 1958. During the same period U.S. exports fell from 2,395,000 to 2,295,000 tons. Most Chinese beans have been sold to Western Europe through Hungary and now Yugoslavia. Further inroads in the European market are likely, as Communist production is expected to rise by more than 1 million metric tons in 1959. Informed German sources indicate that the recent flood damage in China, especially in the soybean area, was not substantial and should be minimized. With

no little concern the Farm Bureau foreign trade office reports that reliable European traders are forecasting that Red China's soybean exports will amount to around 1,350,000 tons in 1959, an alarming 30 percent increase over the 1958 movement. Production of soybeans undoubtedly will continue to increase and American producers must expect severe competition in this area.

It is believed also that the Chinese Communists have serious future export intentions for other oilseeds and tobacco. They also have made small trial shipments of frozen poultry to Western Europe. Livestock product exports from Eastern European countries are also of increasing significance.

IMPLICATIONS OF THE SOVIET ECONOMIC OFFENSIVE TO U.S. POLICIES

On the basis of the foregoing, it obviously is extremely important that the United States be alert to developments in the commercial markets for farm products, especially in the so-called free (and very important) dollar markets of Europe.

During the coming years competition from the Soviet Union, satellite countries, and Communist China will be extremely keen. Moreover, the Common Market is now a fact and may present real problems if it turns out to be restrictive regarding imports. The outer seven is rapidly becoming a reality. It is well also to remember that an annex to the Common Market agreement (protocol 2) enables countries such as West Germany and others to continue to trade freely with Soviet-dominated areas. We must be alert and vigorously merchandise our products if we wish to maintain an appreciable export market for farm commodities.

The United States cannot and should not rely upon political friendships to guarantee markets for our farm products. We must compete on tough commercial terms with quality products.

It must be recognized that trading in farm commodities, especially in grain, is a highly technical and complex business. To be successful grain exporters must be able to follow and observe markets closely on a daily—even an hourly—basis. This can be done far better by the private trade than by the Government.

The Soviet trade offensive—A challenge

We view Russia's entry in the world agricultural market with wheat, or other farm commodities, as a challenge. In response to such a challenge we must determine whether or not U.S. agriculture can compete. We have three possible choices. First, if we cannot compete we could let the Soviets push us out of international commercial markets and store the production which formerly was exported, or attempt to give away the major portion of such production to various countries who are willing, or who could be induced, to accept it. There are some who would advocate such a course for American agriculture. Farm Bureau does not.

The second possible choice would be for agriculture to turn over its export problems to the U.S. Government, which would in turn fight and all-out trade war with Russia on a government-to-government basis. In simple terms this would be an attempt to "out state trade" Russia by offering to undercut prices or enter into bilateral trade arrangements. It is Farm Bureau's contention that the totalitarian

Soviet Union is better equipped politically than the United States to engage in state trading. If the United States made such a choice it would in effect be allowing the Soviets to choose the field of conflict and the implements of battle.

The United States and the American farmer sacrifice a great deal when we turn over to Government the right to engage in trade in the world market.

The third possible choice—and in our opinion the most desirable—is to meet this challenge of Soviet Russia with the economic advantages that are at our disposal under our economic system. The American farmer is the most efficient producer in the world. We can become even more efficient and we must. This means the end to unrealistic domestic farm price support programs and a return to the farmer of those opportunities and incentives which permit and induce him to produce for the market as economically as possible. We should meet the challenge of Soviet Russia with all the force of a vigorous private, competitive enterprise system. We are confident that outcome will prove our economic system superior.

The U.S. advantage in foreign trade

From an overall standpoint, it should be emphasized that at the present time the Soviet economic offensive is still in the nature of a "threat" rather than an actuality. This is not to say that the threat is not real and that the United States should not take positive steps to meet the offensive.

It should be borne in mind that in the field of international trade the United States can have a great advantage. In 1958, total trade to and from the United States was in excess of $30 billion. Total free world trade amount to $95 billion. In the same year Soviet Russia, the satellite countries, and mainland China, considered as a whole, had total exports of $2.96 billion and total imports of $3.18 billion, excluding trade within the area. Thus, the total trade of the Communist bloc with outside countries was equal to only about 20 percent of total U.S. trade and only 6 percent of total world trade.

The United States is a tremendously important international market. It is elementary that trade is a two-way street; that if we wish to hold our export markets, we must allow our customer nations access to the U.S. market. The United States should make firm its offer to all countries of the free world to become a trading partner and to expand trade on the basis of mutual advantage. It is through the inducement of offering other countries the opportunity to expand trade with us that the United States can best thwart the U.S.S.R.'s so-called trade offensive.

Renewed emphasis on the reciprocal trade agreements program could make this program one of the most effective of the devices available for meeting the Soviet challenge. This is in direct refutation of the position held by some that our national security demands greater trade restrictions. In our opinion mandatory import quotas on oil, lead, and zinc decreased rather than increased our national security, in that we have tended to alienate allies and, indeed, customers. Such restrictions on imports inevitably reduce markets for efficient U.S. export industries, including agriculture, and at the same time waste scarce domestic resources by channeling them into marginal operations that otherwise would be unprofitable.

Through our national trade policy, we have chosen to take a multilateral rather than a bilateral approach to foreign trade. In this manner we should work at opening up the total market of the free world, a market 30 times greater than that of the Soviet bloc. In such an environment Russia's puny bilateral offers could have little attraction to free countries.

To achieve such results the United States must do more than adhere to its trade agreement commitments. It must insist that other countries do the same in order to receive the benefits of U.S. concessions. For example, there are still numerous discriminatory restrictions against dollar imports in certain countries, although some progress has been made in removing them. In many cases these discriminatory restrictions are without justification. Countries with substantial dollar and gold reserves should not be given 3 years, 2 years, or 1 year to remove discriminatory dollar import restrictions. They should be required to remove such restrictions immediately if they are to continue to enjoy the full benefits of U.S. policies with respect to the reduction of trade restrictions.

It cannot be argued that we cannot compete with the Soviets as long as they are able to price their goods on a political basis without regard to costs. While there is something to be said for this view, it would be a mistake to overemphasize it. One thing is certain: We are in a weak position either to criticize Soviet pricing policies, or to urge that other countries take countervailing action against disruptive Soviet pricing tactics as long as we subsidize the bulk of our agricultural exports.

If we were to get our own house in order so that we were prepared to enter the world market on the basis of comparative advantage—rather than through subsidies—we would be in a far better position to rally other nations to a program of coordinated action if the Soviets should threaten to demoralize world markets by dumping their products. Every non-Communist country that is trying to develop export markets on an unsubsidized basis has an interest in helping to see that international markets are protected against disruptive tactics such as dumping.

Finally, if we are to retain the opportunity to compete in international markets on the basis of comparative advantage, we must protect the integrity of the dollar by effectively counteracting inflationary pressures here at home. If we fail to do so, we inevitably will be priced out of international markets by a wage-price spiral.

Representing 1,600,000 farm families engaged in an American industry which produced 22 percent of U.S. exports in 1958, Farm Bureau believes that the United States can meet and defeat any Soviet trade offensive as long as it adheres to, and vigorously implements, the principles of private, competitive enterprise that have contributed so much to the development of our Nation.

STATEMENT OF INDIANA FARMERS UNION

(By John Raber, Indiana Farmers Union, Indianapolis, Ind.)

As an Indiana farmer traveling in Russia in July of 1958, I had the opportunity to talk with Russian farmers, to see and evaluate their system of agriculture as it compared to our own.

Since our itinerary was made for us and our time limited, we were not able to see enough of Russia to make our experiences as comprehensive as I feel would be necessary to determine solid concepts about their system. But, even under these circumstances, we could see that all collective farms were not equally managed and that production varied widely.

I felt that Russian state farms had not settled on a procedure or even a standard approach to agriculture. Instead, there was evidence that collective farms were duplicating what we, in this country, would call an experimental farm pattern.

The farms we visited were exceptionally clean. Even hog and cattle barns were decorated with flower pots and white paint. The people who worked these "experimental stations" were proud of their progress and spoke warmly of their Government. They had a deep sense of dedication and accomplishment.

In comparing the American system and economies in agriculture with those of the Russians, I found the Russians had nothing new in equipment and farmer know-how. Russian equipment was lacking in mechanical perfection and Russia was still behind us in our professional approach to production. However, the state of mind of the Russian should give us concern. The Russian farmer feels he is needed and wanted. Each of his successes is met with Government praise and reward. He feels Russia has the better system, and he is pledged to outstrip us in production and in quality. For example, I asked a wheat farmer what Russia would do when they learned how to produce a surplus; his reply: "Then we will use it to make friends for Russia."

The American farmer, on the other hand, feels rejected. He is dedicated to individual ownership of America's farms, and he fears there are forces in the land that want to drive him off the farm. He feels our present farm program is a failure, that local taxes are unfair, that the Government doesn't care about his future.

In comparing the Russian farm economy with our system, I have concluded that the American farmer and his equipment is superior to the Russians. But the attitude of the American farmer today is lacking in enthusiasm and purpose, and his will to succeed is dying. The Russian, on the other hand, accepts this comparison and is dedicated to his task. He has confidence and he is living for his future.

It was William James who said, "You can measure everything about a man except his will to win." We in America must recognize the limited attitude of American agriculture as compared to the "will to win" of the Russian, and we must plan our future accordingly.

SOME COMPARISONS BETWEEN THE SOVIET AND THE UNITED STATES ECONOMICAL COMMITMENT TO EDUCATION

(By W. W. Eshelman, National Education Association, Washington, D.C.)

It is a privilege to appear before this committee in behalf of the National Education Association. My remarks will be confined to one aspect of the important overall theme that this committee is investigating. I would like to spend a few minutes with you on some comparisons between the Soviet and the United States commitment to education in terms of economic capacities.

I am sure that many of the distinguished speakers who have appeared before this committee have cautioned against quick or black and white comparisons. Comparisons are difficult and at best tenuous; nevertheless, they are necessary. Perhaps the word of caution mentioned by Sir Michael Sadler in 1900 might be appropriate. Sir Michael said:

> We cannot wander the pleasure among the educational systems of the world, like the child strolling through a garden, and pick off a flower from one bush and leaves from another, and then expect that if we stick what we have gathered into the soil at home, we shall have a living plant. A national system of education is a living thing, the outcome of forgotten struggles and difficulties and of battles long ago. It has in it some of the secret workings of national life. It reflects, while seeking to remedy, the failings of national character. By instinct it often lays special emphasis on those parts of training which the national character particularly needs.[1]

Turning to the United States, what is our commitment to education? Almost without exception every national leader believes in good health, happy marriages, and good education; yet in that we need to do much more. With a shortage of 140,000 classrooms and 135,000 teachers, this great Nation of ours is entering one of the most decisive periods in its history with an unswerving belief in the importance of good education to our Nation's survival yet unwilling to pay for it. Our total expenditures for all regular school education is roughly about the same as that of the Soviet Union—about $16 billion per year, but, according to Nicholas De Witt's calculations, the percent of our educational expenditures in the gross national product is about 3.7 percent, as compared with 6.5 percent for the Soviet.[2] Realizing the possibilities of error in this comparison, nonetheless it is generally agreed by scholars that the Soviet Union, within the context of its resources and goals, is making a proportionally greater commitment to education than is the United States in terms of our resources and goals.

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[1] Sadler, Sir Michael, "How Far Can We Learn Anything of Practical Value From the Study of Foreign Systems of Education?" Guildford, 1900, p. 11 f.

[2] De Witt, Nicholas, "Basic Comparative Data on Soviet and American Education," Comparative Education Review. 2 :9–11, June 1958.

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The overriding characteristic of the Soviet system is its fervent dedication to world communism and its strong belief that communism will inevitably dominate the world. They believe their way of organizing society represents a higher social system than capitalism and they believe their dialectic will in time replace capitalism. In the Soviet system, with its overriding commitment to a political "end," economics serve as a "means" to the "end"—an "end" that believes in man as master of men as opposed to our belief in man as master of man.

The Soviet emphasis on education is based partly on the Marxist principle that all cultures reflect their economic environment, and on Lenin's practical opinion that "you cannot build a Communist state with an illiterate people." To expand these points somewhat: Soviet leaders long have considered education as an essential part of the Communist scheme. They believe in the validity of scientific materialism, which, simply stated, refers to a view of the world which believes entirely in the ability of knowledge to conquer all obstacles, given time. Education, therefore, is the key to all doors. Education can eliminate superstitions and backward beliefs; education can promote the culture and language arts; education can be used to mold minds into desired ideological grooves; and education can provide the skill to build machines. A recent visitor to East Germany noted an interesting parody upon the Lenin theme. The sign read: "Study, study, and, once again, study."

What about Soviet education?

Let me begin by stating what seems to me a case of bordering on the ridiculous if it were not so serious. Today we simply do not know enough about Soviet educational finance to make anything more than intelligent guesses about this important problem. One of our leading authorities on Soviet manpower and education, Dr. Nicholas DeWitt of Harvard's Russian Institute, recently told an NEA staff member that he had six Soviet books and many journals waiting to be translated. We should view with alarm this situation. While we talk much about the challenge and threat of communism, our scholars do not have sufficient help to translate those works which are necessary to assess the extent and direction of the Soviet effort. Dating back to Biblical times, the adage "Know thy enemy" has been important to survival. I submit to this distinguished group that we do not know our enemy in the important field of educational finance. Therefore, it would seem highly fitting for this committee to explore measures that might be taken to provide our researchers with sufficient assistance to have important Russian sources translated into English.

Considering the insufficient evidence that is available at the present time, what can we say about the financing of Soviet education?

As mentioned before, DeWitt has found that the Soviet Union spends about 6.5 percent of the gross national product on education. This figure is somewhat below the 10 to 15 percent estimates given in the latest Office of Education report.[3] The problem lies primarily in the definition of education. Without going into technical aspects of this question, it can be mentioned that funds for education in the

[3] Report of the first official U.S. Education Mission to the U.S.S.R., "Soviet Commitment to Education." Washington, D.C.: U.S. Government Printing Office, 1959, p. 13.

U.S.S.R. come under the division of the planned budget which is for "health and educational-cultural activities and social services," regardless of the national, republic, or other government channel through which moneys are distributed. Soviet news releases announced 26.1 percent of the 1955 planned budget for such services and activities as a whole.[4]

Under the centrally controlled, planned economy of the U.S.S.R., the educational budget relates to public funds from the general revenue of the state. Taxes are not levied specifically for educational purposes and there is no privately financed educational system. The state budget for education provides for building construction and maintenance, supplies and equipment, salaries of teachers at all levels, stipends for students in institutions of higher education, special programs in education, and miscellaneous expenses. Industrial enterprises and collective forms also provide considerable supplementary support for education, primarily in equipment and facilities.

The supplementary support of Soviet education is very difficult to estimate. For example, if a Soviet community decides to paint its schoolhouse, not an infrequent occurrence, this should be counted as part of the total cost of education; yet it is almost impossible to make even an educated guess at present regarding this extracurricular community participation. Recent educational reforms will tie the schools even closer to industry, thereby promoting even greater impromptu or nonauthorized support than ever before, making the task of comparison even more difficult.

And even if a quantitative comparison could be assessed with some accuracy, its qualitative significance is another matter. For example, the Soviets are, roughly speaking, producing two or three times as many engineers as the United States. Yet this does not tell the whole story. In the first place, the Soviet level of development—across the board—is about where we were at the turn of the century. They need many more engineers in order to industrialize than we—already a highly industrialized nation—need to sustain and develop further our economy. Also, the Soviet population is approximately 12 percent greater than ours. And finally, the key figure may not be the numbers of engineers produced, but the numbers of skilled and semiskilled workers that are being turned out. In this category the Soviets are deficient, but they recognize the need and are expanding their program.

Turning for a moment to teachers and teachers' salaries: I am not happy to report that the Soviet society seems to treat its teachers better, financially and prestigewise, than we do. In his statement before the National Press Club, the U.S. Commissioner of Education noted about his mission's trip to the Soviet Union:

> * * * We saw no evidence of any teacher shortage. Teacher workloads and other working conditions are advantageous. Teacher prestige is high; only the best are chosen to teach—one out of six who apply for training. Salaries are at the levels of those of doctors and engineers; in fact, a fully trained doctor and nurse are regular members of each school staff.[5]

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[4] U.S. Department of Health, Education, and Welfare, "Education in the U.S.S.R." (Bulletin 1957, No. 4) Washington, D.C.: U.S. Government Printing Office, 1958, pp. 23–24.
[5] Derthick, Lawrence G., "The Russian Race for Knowledge," School Life, vol. 40, pp. 3, 4.

Commenting upon salaries of American teachers, the Rockefeller Report on "The Pursuit of Excellence" states forcefully the American problem in this manner:

> * * * The root problem of the teaching profession remains financial. More perhaps than any other profession, teaching needs dedicated men and women to whom pay is not an overriding consideration; but until we pay teachers at least as well as middle echelon of executives, we cannot expect the profession to attract its full share of the available range of talents. Salaries must be raised immediately and substantially.[6]

Before turning to some general conclusions, I would like to spend a few minutes on the financing of American education. Generally, expenditures for American education are computed by adding up to total cost for public and private elementary, secondary, and higher education plus a small miscellaneous category and dividing this total by the gross national product. This is one way of doing it and it is statistically proper to do so. It overlooks, however, the larger societal commitment that we have made to education. Today, we really have four systems of education. A recently completed, and, as yet, unpublished study by an educational economist—Prof. Harold Clark—discusses American education in terms of these four systems, which are: the regular school system, business and industrial courses, organized group study, and systematic self-study.[7]

I think American education, viewed in this broader context, makes more sense for the purpose of this paper because it tells something about our society as a whole, and the Soviet challenge must be met by the whole society. The amount of education that can be provided by a society depends upon its overall efficiency as well as the efficiency of the educational system itself.

In William Benton's provocative book on the Soviet challenge, he mentions that public school education has traditionally depended on the general property tax. This tax is inflexible. It does not respond to rising income or inflation. It now contributes about one-eighth of all revenues. Its importance has steadily declined. Relative to other taxes, it provides but 25 percent as much revenue as it did 25 years ago.

State and local debts have trebled. Further, putting increased burdens on State and local governments tends to strike most heavily against low-income groups; whereas 80 percent of Federal taxes are on income, less than 10 percent of the State and local taxes are on income, and more than 90 percent are on property and consumption taxes that weigh heavily on low-income groups.

The inadequate fiscal capacity of State and local government, the unequal capacities of States, and the urgent requirements of national defense are among the reasons for Federal support of schools. Poor States try harder but they are necessarily bound to lower standards, as the system works today. Thus in relation to income, Mississippi spends twice as much for school aid as New York. Yet in 1953–54, expenditures per pupil averaged $110 for Alabama and Mississippi and $341 for New York State. In a recent year, 12 richer States had

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[6] "The Rockefeller Report on Education," "The Pursuit of Excellence: Education and the Future of America," (America at Mid-Century Series) Garden City, N.Y.: Doubleday & Co., Inc., 1958, pp. 25, 26.

[7] Clark, Harold F., and Ruth E. Sobkov, "How Much Can the People of the United States Afford To Spend on Education? (Unpublished report) 1959. (141 pp.)

fewer than 5 percent of their registrants failing the selective service education test; but from 13 poorer States 20 to 49 percent failed.[8]

Carrying Benton's point on Federal support one step farther, the recent Rockefeller report on "The Pursuit of Excellence," a pursuit fully realized in the report, it goes directly to the heart of the matter when it points out that—

> Excessive dependence upon State and local revenues—particularly the latter—upon the real property tax * * * more than anything else * * * gives rise to current proposals for increased Federal support of education. For those who wish to resist or postpone the resort to Federal funds and at the same time not constrict educational service there seems to be only one alternative: a thorough, painful, politically courageous overhaul of State and local tax systems.[9]

Even allowing for considerably greater efficiency in the use of educational funds, it is likely that 10 years hence our schools and colleges will require at least double their present level of financial support to handle our growing student population. In other words, by 1967 the entire educational effort is likely to call for expenditures on the order of $30 billion, measured in today's prices. Since the gross national product by 1967 has been estimated to be around $600 billion, educational expenditures would absorb about 5 percent of gross national product in contrast with the current 3.6 percent level.[10]

In conclusion, one can say that the Soviet Union is quite totally committed to communism as a way or organizing people, and to education as a tool or instrument to that end; the United States is quite committed to democracy as a way of organizing society, which allows the individual that degree of freedom compatible with the society as a whole.

We must always be openminded about learning and borrowing something of value from the Soviet system. From the early days of our Union, Americans have been adopting other ideas as well as inventing their own. If the Soviets have an educational technique or idea that can improve our system, by all means we should adopt it. Not to do so weakens our system—a very unwise and perhaps fatal price to pay to pride and self-satisfaction.

Within the context of their system and their objectives, the Soviets may well be achieving more progress toward their ends than we are toward ours. Our decentralized and diversified society has done remarkably well in educating the people. Our free, public school education is unique in history. Our commitment to education has paid us back manyfold in our amazing agricultural and industrial growth. Yet, as we enter the second half of the 20th century, our Nation is faced with internal and external problems that will force us to do a better job of education than we have done at any time in our history. In this context, I close with a short paragraph from the "Rockefeller Report":

> The Nation's need for good education is immediate; and good education is expensive. That is a fact which the American people have never been quite prepared to face. At stake is nothing less than our national greatness and our aspirations for the dignity of the individual. If the public is not prepared for

[8] Benton, William, "This Is the Challenge." New York: Associated College Presses, 1958. Pp. 136–137.
[9] "The Rockefeller Report," op. cit., p. 35.
[10] Ibid., p. 34.

this, then responsible educators, business leaders, unions, and civic organizations must join in a national campaign to prepare them.[11]

Percent of national income going to education

	Total in millions of dollars	Percent of national income
I. Direct expenditures for education:		
A. Regular system:		
1. Public elementary and secondary schools	$11,737	3.33
2. Private elementary and secondary schools	1,748	.495
3. Miscellaneous	90	.003
4. Higher education, public and private	4,404	1.25
Total	17,979	5.097
B. Business and industry	10,000	2.83
C. Group	5,000	1.42
D. Self	1,500	.42
Total direct cost	34,479	9.77
II. Support of students in regular system	24,200	6.86
40,286,000 at $600 [1]	58,679	16.83

[1] Excludes approximately 1,080,000 college students whose room and board is included under auxiliary expenditures of institutions of higher education.

[11] Ibid., p. 33.

SOVIET ECONOMIC GROWTH AND UNITED STATES POLICY

(By Howard C. Petersen, Committee for Economic Development)

The rapid growth of the Soviet economy is one of the leading facts of our lifetime. It is an important fact for everyone, including the United States, who shares this little globe with the Russians. But just how it will affect us and how we should respond are, in my opinion, far from clear or certain. Therefore I welcome the effort of the Joint Economic Committee to explore these questions.

I submit this paper in the spirit of participation in an exploratory discussion. I am not an expert on the Soviet economy or on the intentions of the Soviet leaders. Neither is the Committee for Economic Development,[1] on whose behalf I respond to the invitation of the Joint Economic Committee to present a paper. Although I am testifying as CED's representative, the views I am expressing here are my own responsibility, and do not necessarily represent the views of the Research and Policy Committee or other CED committees or individuals. However, the Research and Policy Committee of CED, in a number of statements on national policy, has encountered the fact of the growing Soviet economy. This was notably true in our work on national security, foreign economic assistance and U.S. economic growth.[2] We have had to form some judgments, based on information we could readily obtain, about the significance of the Soviet economy for our policy. This paper reflects these judgments as well as presenting additional views of my own.

I. GENERAL ECONOMIC ASSUMPTIONS

Let me begin with three assumptions about the size and growth of the Soviet economy in relation to our own. I base these mainly on previously published information since estimates contained in the papers in this compendium are largely unavailable to me at the time of writing.

First, I assume that at the present time the total gross national product of Russia is at least two-fifths that of the United States and its per capita output at least one-third ours, but not much more.

Second, I assume that the yearly percentage increase in Russian gross national product during the past decade has significantly exceeded that of the United States. In this period the Russian growth

[1] The Committee for Economic Development is composed of 185 leading businessmen and educators. Its purpose is to conduct objective economic research, to support and promote economic education and to formulate and publish recommendations on major economic problems that will contribute to growth and stability in the American economy, higher living standards and increasing opportunities for all Americans, and to strengthening the institutions and the concepts essential to progress in a free society.

[2] Committee for Economic Development, "The Problem of National Security—Some Economic and Administrative Aspects" (1958); "Economic Development Assistance" (1957); and "Economic Growth in the United States—Its Past and Future" (1958).

rate may have been 6 or 7 percent a year. Recent changes in this country have been quite irregular. Our average long-term rate, in which there is no clear evidence of change, has been about 3 percent, and I use that figure as measuring our current trend. On that basis, the average absolute yearly increase in total Russian gross national product is less than that in ours but is approaching it and if recent growth rates continue may soon exceed it. On the basis of the same estimates, the absolute yearly increase in Russian per capita gross national product already is larger than ours. I am not making a judgment that investigators who suggest a much lower rate of Soviet growth than these comparisons imply are necessarily wrong, but to base policy upon their findings does not seem to me prudent unless the evidence becomes more conclusive than it is now.

Third, I assume that the difference between the growth rates of the two countries cannot be extrapolated into the distant future. It is easy enough to show arithmetically that if one country maintains a higher growth rate than another, eventually it will reach and surpass it. If the Soviet gross national product is now two-fifths as large as ours, and if the Russians maintain a growth rate 1 percentage point above ours—say, 4 percent against 3—their gross national product will match ours in 93 years. If the difference is 2 percentage points, it will take 47 years; if 3 percentage points, 31 years; and if 4 percentage points, 24 years. Such calculations are startling but provide inadequate basis for present policy. While economic growth results from a complex of influences, the exceptional height of the Soviet growth rate, if it really exists, is evidently made possible in the main by five forces. These are—

1. Russia has devoted a large proportion of her output to investment. On a comparable basis, gross investment in real assets, public and private, represents perhaps 25 percent of gross national product in Russia and 20 percent in the United States. The difference in net investment rates is larger.
2. The Soviet authorities have been able to control demand patterns in a way that has diverted production and supporting investment from activities where the value of output per employee is low, calculated on the basis of controlled internal relative prices, to activities where it is high.
3. The Russians have experienced a large expansion of the nonagricultural labor force, based on the shift of workers from agriculture.
4. Russia has experienced the large gains made possible by the spread of a basic education among a previously largely illiterate population, and the initial training of a quickly expanding industrial labor force.
5. Russia has had opportunities to increase productivity greatly by the introduction of techniques already prevalent in Western countries and, increasingly, in the technologically advanced sectors of the Soviet economy. This is probably the most important element of all in making possible her large output advances.

These advantages are not, of course, unique with Russia; they are at least potentially available in varying degrees to all but the most advanced countries. Unlike most other countries, however, Russia has had an all-powerful centralized authority with the drive to take full

advantage of them to push growth regardless of the present sacrifice imposed upon her population.

Can Russia's high growth rate be maintained? Despite internal pressure for better living conditions, Russia may continue indefinitely to devote the present high proportion of gross national product to investment. This would permit consumption to expand in proportion to gross national product, which may be sufficient to satisfy her population. But the other four elements permitting exceptionally rapid growth are essentially transitional advantages which will become of decreasing importance as the stage of development of the Russian economy becomes more similar to ours. As the differential in the level of output is reduced, it is likely that the differential in growth rates will also narrow. The realistic expectation as of the present time is that our relative advantage over the Russians will continue to diminish but at a slackening rate. Since information concerning production technique available to all countries is about the same, and since Russia is well endowed with natural resources and may eventually match the size of our capital stock and the diffusion of education over the whole population, there is no sufficient reason to feel sure she cannot some day match us in per capita output, although most of us may properly have sufficient confidence in the superiority of our own system to doubt that she can do so.

If we compare the output of the NATO alliance as a whole with that of the European bloc countries as a whole, the comparison with respect both to present level and to growth appears more favorable to us. Some of the Western European countries have been growing about as fast as Russia, and the total economic potential of our NATO allies greatly exceeds that of the European satellites.

II. WAYS IN WHICH SOVIET ECONOMIC EXPANSION MAY AFFECT US

The relative size and growth of the Soviet and American economies may affect the Soviet threat to us in a number of ways. The principal points of possible impact include—

(*a*) The ability to bear the burden of military programs and to progress in military strength;

(b) Aid and trade with the underdeveloped world;

(*c*) The Soviet ability to conduct an offensive economic policy against the United States and other industrial countries and our ability to withstand or retaliate;

(*d*) The attitudes of the "neutrals," mainly underdeveloped countries;

(*e*) The attitude of the U.S. population and Government;

(*f*) The attitudes of our Allies;

(*g*) The attitudes of the Soviet satellites; and

(*h*) The internal Russian political situation and the international objectives of Soviet policy.

The prospect of faster economic growth in the Soviet Union than in the United States probably is adverse to our position in almost all of these areas. Nonetheless, it does not seem to me likely to be the decisive factor in the outcome of the East-West struggle, provided that our own performance is at least as satisfactory as in the past.

Military strength

The larger a nation's national income, the smaller is the burden of financing military expenditures at any stated level. Economic growth clearly increases the size of the military program it is possible for a nation to support. Among countries with at all comparable resources, however, differences in actual military strength are much more closely related to their appraisals of need and willingness to sacrifice than to rates of economic growth or absolute limits imposed by the size of their economies. If we were devoting the same proportion of gross national product to national security in fiscal year 1953 as we would be if defense expenditures had kept pace with economic growth over the intervening period, we would now be spending $66 billion a year for national defense instead of $46 billion. Were our Government convinced that it was necessary, we could and would spend a good deal more than that.

Despite a much smaller economy and a larger population to support, the Soviet Union maintains a powerful and diversified military machine sufficient to provide approximate military parity with the United States. She does so by devoting a larger portion of her gross national product to this purpose than we do, by eliminating features that add more to the comfort and safety of her armed forces than to their striking power, and by paying her armed forces a great deal less, as well as by less obvious means.

Clearly the size and rate of growth of the United States and Soviet economies, though important variables, are not the decisive ones determining their relative military strength.

Aid and trade with underdeveloped countries

Soviet aid has very largely taken the form of loans at rather low interest rates. Whether, and under what conditions, Soviet loans to underdeveloped countries outside the bloc are adverse to our interests is itself a complicated question. If they actually contribute to economic progress in these nations, which certainly is an objective of our own policy, they may even be in our long-term interest. In any case, even more than that of military programs the scope and character of economic aid to underdeveloped free nations will be determined by considerations other than the capacity to provide aid. In neither Russia nor the United States does such assistance amount to more than a fraction of 1 percent of gross national product or to any considerable proportion of defense spending. Heavy concentration on aid requiring use of a particular type of facility, such as the provision of steel mills, might well tax Russian capacity at present. But this is a matter of foresight in arranging for expansion of specialized capacity in such areas or in scheduling aid programs rather than of general economic growth.

Trade of most underdeveloped free countries with the Soviet Union is presently trivial in comparison with their trade with the West. Russia accounts (based on 1956 data) for more than 10 percent of imports only in Afghanistan and Yugoslavia, and of exports in these two countries and Iran. Measurement by trade with the bloc as a whole would add only four other countries to such a list. Soviet trade is small primarily because Russia has followed a policy of extreme autarchy. The Russian policy of self-sufficiency has been

relaxed in recent years but only slightly insofar as countries outside the bloc are concerned. If Russian trade with most countries were doubled or tripled as a result of Soviet economic growth, it would still be tiny in comparison with their trade with the West. The volume of her future trade, conducted for ordinary commercial purposes, will depend far more on future Russian trade policy than on her rate of economic growth.

Most underdeveloped nations are greatly dependent on the export of one to three raw materials. A sharp drop in the volume or price of exports of these commodities has catastrophic consequences for their balance of payments and hence for their development programs. In the past few years Russia has stepped in with offers to buy whenever such situations have developed. In some well-publicized cases these commodities have reappeared in markets outside Russia to compete in the original exporter's usual markets, and the transaction has neither helped the underdeveloped nation nor earned good will for the Soviet. It is evident, however, that real opportunity exists for Russia to advance her influence by buying raw materials in depressed markets in good faith. Consumer commodities like coffee and fish can be offered to Russian consumers. Industrial raw materials can either be permitted to replace Russian production or, if she is unwilling to relax her policy of self-sufficiency, stockpiled or destroyed. Only in the last case is any real cost imposed upon the Russian economy by this type of purchasing; it then becomes, in effect, a form of aid.

Russian growth will contribute to Russia's ability to expand trade on a commercial basis. It may result in a wider variety and better quality of goods offered for export. It will increase her ability to absorb imports. It will increase her economic capacity to provide aid through purchase of unwanted commodities, just as in other forms. But the future course of all forms of Russian trade with underdeveloped countries will be determined much more by her policy decisions than by the rate of her economic growth.

Ability to conduct an offensive economic policy against industrial nations

The larger the Russian economy, the greater will be her ability to incur the costs of a policy of economic warfare against the United States and other industrial nations. This might involve dumping commodities to disrupt western markets, preclusive buying of commodities in short supply, and possibly attempts at manipulation of foreign currencies. But there is little evidence of any deliberate Russian policy to engage in such activities. Such practices would necessarily involve costs to her. In fact, the aggressor in this type of warfare is not likely to inflict as much loss on an opponent as he himself incurs, except, perhaps sporadically in unusually favorable circumstances. Moreover, defensive steps are possible. I do not see strengthening of Russia's capacity to engage in this kind of activity as an important consequence of her higher growth rate.

Attitudes of peoples throughout the world

A situation in which the Soviet economy is generally recognized to be growing faster than ours, not only in percentages but also absolutely, not in spurts but steadily, and is approaching ours in total size, could, it may be supposed, greatly affect the attitudes of peoples

throughout the world. It might greatly strengthen the confidence of the Russians in their own system, strengthen the dependence of their satellites upon them, increase the attraction of the Communist system for the independent, underdeveloped countries, worry our allies about their reliance upon us, and weaken our own morale. Yet I think all of these things are either unlikely to occur as a result of comparative U.S.-Russian growth rates or unlikely to be important to our position.

Consider the underdeveloped nations of the free world that are either emerging into a phase of sustained economic growth or hoping to do so. Their success is of the utmost importance to us. If they achieve vigorous growth and visibly rising living standards, they are not likely voluntarily to abandon freedom for communism; if they do so it will be for other reasons, such as the inability of the masses to eliminate by other means an unacceptable distribution of income or system of land tenure. If their plans for economic development are badly disappointed, they will, indeed, consider the Communist alternative. But they are more likely to compare their experience with that of China, Mongolia, North Korea, or Vietminh than with that of Russia or the European satellites. Insofar as third-party comparisons are made at all, comparison of the growth rates of India and China, the largest underdeveloped countries of the free and Communist worlds, is likely to seem more relevant than that of Russia and the United States.

That in the United States, Canada, or the Western European countries—some of which themselves have had postwar expansion comparable to that of Russia—any considerable number of people other than those already enrolled in Communist Parties could be attracted to communism by a fast Soviet growth rate seems scarcely credible. Educated peoples with full access to information are not likely to barter freedom for slavery to gain even real economic advantages unless their own conditions are intolerable. If any economic development does produce such a result, it will be a major domestic depression, involving widespread unemployment, or else stagnation in per capita incomes of the mass of the people. It would be, in other words, because of the failure of the Western societies as judged by their own standards.

We could lose our allies not because they are attracted to communism but because of loss of confidence in us. Failures in our foreign policy, an inadequate military posture, or the sheer terrorism of the mutual power of destruction provided by modern weapons might lead to this result. But it is hard to see how changes in relative economic potential could do so, particularly since there is so little chance that, with present borders, the size of the economies of the Western Communist countries can come to match that of the combined NATO Powers, nor that of the whole Communist world that of the free world.

The attitudes of the peoples of the satellite countries also will be influenced mainly by conditions within their own borders, not by comparisons of the Soviet and U.S. growth rates. In addition, before Russia can command popular support there, she must somehow escape the onus of representing the imposition of an alien power and her past record of terrorism.

It is the effect upon Russian attitudes that is most open to question. Surely, the Russians may be expected to take pride in their progress and to exult if they ever succeed in their goal of overhauling us in what they view as an economic race. But it is hard to see how the Soviet leaders could become more implacable enemies of the Western democracies than they have been in the past. And it is hard to see why their own success should increase hostility toward us among the Russian people.

On the other hand, there is at least reason to hope that rising living standards will lead to humanizing political and economic changes within the Soviet society, the emergence of a different type of leadership, and a less truculent attitude toward the outside world. This must, indeed, be our principal hope for a more assured peace in some future period. But this hopeful prospect is far too hypothetical to permit us to rest policy upon it now.

III. IMPLICATION FOR U.S. POLICY

The rise of Russian economic power is one of the great developments of world history. It was probably inevitable regardless of the form of Russian government. It is important that we understand it and that the peoples of the world understand it and place it in its proper perspective.

Our reaction should not be one of amazement or despair. What Russia is doing other nations have done, though other nations have done it with less feverish haste and far less human cost. Our reaction should not be to attempt to match the present Russian growth rate simply because the Russian rate is higher than ours. Those suggesting such a course have not, in my opinion, even begun to explore its implications or its costs.

In general, there are four broad types of action we might consider to accelerate our own rate of growth.

First, we can try to reduce involuntary unemployment of resources, especially to minimize the depth and duration of recessions.

Second, we can try to make our economic system work more smoothly so as to get more real product from the resources now going into production. We can try to make our system more competitive, and remove public and private impediments to the mobility of resources and to the introduction of improved techniques. We can reduce barriers to trade. We can reexamine our tax structure with a view to improving incentives and reconsider various governmental subsidies and price supports.

These are desirable things to do. In our own interest we should try to reduce unemployment and increase the efficiency with which we use resources regardless of the Russian threat. But the reduction of unemployment and elimination of most of the barriers to efficiency we can readily think of would mainly provide one-time gains. They would yield a limited nonrecurrent increase in output but not an increase in the rate of growth. These are quite different things.

Suppose, for example, that unemployment had not exceeded 4 percent of the labor force in any year from 1947 to 1957, and had been what it actually was in the years when it was lower. This seems a reasonable interpretation of what is meant by sustaining a higher level

of employment. In that case, employment over the period would have averaged about one-half percent higher than it was. Output would probably have been bigger by a somewhat larger percentage—say 2 percent as a high estimate.

If we could do that much better in the future, output might be 2 percent higher than otherwise. But this would not be equivalent to the difference between a 3 percent and a 5 percent growth rate. It would be a once-for-all increase, equivalent to growing 5 percent rather than 3 percent in 1 year, not over any longer period. The 2-percent higher output would presumably permit some increase in the amount of saving. As a first approximation this might be a 2-percent increase in the amount of saving. Under certain assumptions this would contribute to faster growth. But the contribution would be insignificant.

Nonrecurrent gains, though well worthwhile, will not go far toward matching the Russian growth rate.

The third possibility, then, is to increase the amount of work done in our society. In the past, average annual hours of work have declined about one-half percent a year. If we stopped this reduction now, we might thereby hope to add to our past growth rate about one-half percent a year, on the very favorable assumption that none of the past increase in output per man-hour was the result of shortening hours. The other possibility of increasing total man-hours is through faster expansion of the labor force, but the possibilities for cumulative effects here except by affecting the size of the total population, appear much smaller.

Fourth, we can increase the rate of economic growth by devoting more of our output to uses that promote growth.

More investment, more research, more education are needed for growth, but they are needed just to sustain the rate of growth we have been getting. We have achieved an average growth rate of 3 percent per annum over the past 50 or 75 years by increasing our annual devotion of resources to investment, research, and education. In order to increase the rate of growth it is not sufficient just to increase these things; it is necessary to increase the rate of increase.

The amounts of increase in the rates of savings, investment, education, and research needed to get any given increase in the rate of growth are literally unknown. There is great need for much more information before we can talk sense about this subject. Some crude calculations of what might be necessary give staggering results. They suggest that we have to find out not whether it would take $3 billion or $5 billion or even $10 billion more a year of investment, research, and education to get our growth rate up from 3 percent to 5 percent, but whether it would not take something like $75 billion a year.

Suppose the 3 percent growth rate results from an annual increase in the labor force of 1 percent a year and an annual increase in output per worker of 2 percent a year. Unless we speed up the increase in the labor force, to raise the 3 percent growth rate to 5 percent would require the annual increase in output per worker to be raised from 2 to 4 percent—that is, to be doubled.

To obtain the present increase in productivity we are spending something like $75 billion a year, or 15 percent of our total output

at high employment, on net investment in productive assets, public and private, on education, and on relevant research. The simplest estimate is that to double the increase in output per worker we would have to double these expenditures to $150 billion a year, or 30 percent of our output. An increase of $75 billion in these private and public outlays implies, of course, a corresponding increase of $75 billion a year in the sum of the Nation's saving and tax payments. To get a simultaneous increase in taxes and savings on such a scale without seriously impairing incentives important to growth would clearly be extremely difficult.

I do not wish to place any great burden on the figures I have used for illustration. But the main point is that the requirements for an increase in the rate of economic growth, say from 3 percent to 5 percent—which still would not equal the present Russian rate—may be very large, much larger than seems to be contemplated in current discussion. There are many different facts, estimates, and assumptions that could be introduced to change these figures. But we are not now in a position to decide that we want a significantly higher growth rate on the assumption that it will be easy to achieve. It will obviously take some doing.

There is no reason to think that the United States is exempt from the law that we are preaching to underdeveloped countries all over the world—that more growth in per capita income requires more savings and more investment in productive facilities, education, and research. And there is no reason to presume that the proportionate increase required is smaller than the proportionate increase in the growth rate desired. In fact, this assumption is in all probability overoptimistic, since it is not likely that an increase in growth-supporting expenditures will yield a fully proportionate return.

To increase the long-term growth rate by one or two percentage points is a formidable undertaking, requiring some really basic changes. It probably can be done, if this is accepted as a sufficiently urgent objective of national policy to give it an overriding priority. My interest here is in showing that if the crude estimates presented above are anywhere near correct there has not yet been in this country any serious consideration of the steps that would be necessary. I shall not attempt here to spell out any steps by which the result might be achieved, though it seems obvious they would be drastic. What seems to be involved is a degree of governmental intervention in economic life that would change the very character of our free economy.

The implication I draw from all this is that the United States should promote its own growth by reasonable means, not by all means. Our past performance has given us an economy that has long been the envy of the world and that has given us the highest living standard ever known. Surely we wish to progress as rapidly as in the past, and to do better if we can—but not at any cost. There is no necessity for us to match the present Russian growth rate.

We are engaged in a competition of systems, not a competition of growth rates. Our strategy in this competition should be to make our own system work as well as we can, in terms of its own values. The values that our system serves are the values that men everywhere would choose if given the chance. Men want freedom, security, rising living standards for themselves and their families, relief from the

burdens of toil, fair treatment, and personal dignity. If they did not we would be faced with an awful dilemma. But I believe that we are justified in believing that people everywhere want the basic things that we want, and that the attractiveness of our system is enhanced by its demonstrated success in achieving these goals.

More rapid growth contributes to the success of the system, but is not identical with success or the sufficient means to its achievement. For us to seek to force our rate of economic growth by a great expansion of the role of government, and by curtailing the freedom of families to choose between consumption and saving and between work and leisure, would be inconsistent with our own values. And it would not make our system more appealing to others.

The Russian threat is grave. It demands from us a strong and varied response. The response should not be imitative. Our danger is not that our total economic resources are, or will be in the foreseeable future, too small for the promotion of U.S. policy. Our great need is not for larger resources but for the best use of the resources we have.

We should use the resources we have—which are superior to those of the Russians now and will be at least equal to them for the foreseeable future—to promote U.S. policy better.

I do not know whether our military strength is adequate to meet the tests it may face, but if larger defense expenditures will add to our security, they should be made. Our greater economic strength gives us the ability, if we wish to use it, to seize the initiative in the development of large and varied military forces and in the deliberate obsolescing of equipment and to place pressure on the Russians to maintain equality with us. Whether we should do so is a political question, not a matter of economic potential.

We should be providing much more economic development assistance to the underdeveloped countries of the world than we are doing now. Their success is vital to us, and our assistance to them may be critical to their success.

In neither of these fields should we hold back because of vaguely felt fears that we cannot afford to do what is necessary, that financing adequate defense and assistance programs will somehow damage our economy or impair our growth. Any additional public expenditures for these purposes must be matched by higher taxes to avoid feeding inflationary pressures. Stability of the value of the dollar is properly an important objective of our economic policy. Attention must be given to the way in which taxes are raised so as to minimize any curtailment of private saving or incentives to work. Given the exercise of a reasonable degree of common sense and responsibility in these matters, however, such fears have little foundation.

We should be acting vigorously to counter the Soviet drive for foreign expansion in all its aspects—not only the Soviet use or threat to use force, but their propaganda, their use of foreign trade as a political weapon, their support of subversion of government, and their meddling in domestic politics everywhere, often combined with the supplying of money and arms. Wherever possible we should be seizing the initiative.

We should be moving vigorously to reduce international trade barriers. We should utilize fully the powers granted by the Trade Agree-

ments Act to achieve gradual and selective reductions in our own tariffs and, by negotiation with other countries, to secure reductions in their barriers to international trade. Aside from the direct advantage of such a policy to us and to other advanced countries, we must insure a structure of international markets that will provide newly developing nations opportunity to participate fully and fairly in international exchange. Our new addiction to the imposition of quotas when foreign countries successfully penetrate our markets is the worst possible course for us to follow, one that is especially well designed to harm our friends and to create opportunities for the politically inspired Russian trade offensive.

At home we and other advanced Western nations should adhere to our own values of what is good and desirable, and manage our domestic affairs in the light of our own criteria of success, not by the criteria of Soviet communism, if we wish to maintain vigorous and self-confident societies. Of course, economic growth decidedly continues to be one of the central objectives of domestic policy in our own interest. Public policies must be reviewed from the standpoint of their effect upon growth. It is the source of our ability to provide better living standards, more freedom of choice, more leisure, and better educational opportunities, and to protect the less fortunate against the hazards of life. We are far from having reached the state where additional income is of little interest to us. But economic growth is not an overriding objective that calls for drastic changes in the way we organize our society and allocate our resources. The resources we allocate to growth should be based upon our own interest, as determined in part by the amount private citizens wish to save or invest and to spend for education and research, and the valuation they place upon income as against leisure, and in part by our political decisions, reached through the democratic process, as to how much we wish to pay in taxes for public expenditures that promote growth.

Our success in the continuing struggle against Communist imperialism will be determined by our faith, determination, willingness to sacrifice, intelligence, and ingenuity. If we fail it will not be the result of an inadequate economic base, unless future changes in relative economic growth are much different from what we can now foresee.

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EVALUATION OF THE SOVIET ECONOMIC THREAT

(By Gerhard Colm,[1] assisted by Joel Darmstadter, National Planning Association, Washington, D.C.)

SUMMARY AND CONCLUSION

A statistical "thaw," following Stalin's death, has provided increased knowledge about the Soviet economy. While some statistical exaggerations and distortions persist, Soviet claims must not be shrugged off, but carefully evaluated. Tangible Soviet achievements in science, education, and weapons technology bear this out.

Soviet economic growth is a threat to the extent that it serves as an instrument of military buildup and militant foreign policy. The comparison between Soviet and United States economic strength indicates that the United States can, for decades, still have the greater economic capacity. What is decisive, however, is not only potential economic capacity but also the extent to which the potential is realized and the allocation which is made to purposes of defense and foreign economic policy.

In recent years, Soviet output—both total and per capita—has grown at rates considerably in excess of those in the United States. With proper measures by government, business, and labor it should be possible to increase the annual rate of growth in the United States to 4–5 percent. At the same time there are grounds for believing that Soviet growth rates will diminish somewhat, say to 6 percent. This difference in growth rates is not enough to justify Soviet boasts of equaling U.S. output in the foreseeable future. However, the difference in annual increments will decline substantially. Both in Russia and the United States, the increase in production makes it economically possible to increase substantially national security and foreign economic activities and at the same time add to productive capacity and improve the standard of living. Political determination appears to be more important than the economic potential.

The highly publicized Communist economic aid activities of the past several years have been far below comparable U.S. or Western efforts. Yet, the Communists seem to have achieved a relatively large measure of success, both because of their capacity to combine aid with trade and because they can exploit latent fears and suspicions rooted in the colonial heritage of many underdeveloped nations. In addition to foreign assistance, the Communists have engaged in some practices—for example, massive sales of tin and aluminum on Western markets—which may not have been politically motivated but which

[1] This paper is based largely on the monographs which have been published by, or prepared for, the National Planning Association's research project on the "Economics of Competitive Coexistence." Use has been made also of several chapters of the final volume which the research director of that project, Dr. Henry G. Aubrey, has in preparation. Nevertheless, the views expressed in this paper are our own and do not necessarily reflect those of the National Planning Association or of Dr. Aubrey.

constitute tools for disrupting the free world economy, available for recurrent use.

In evaluating the potential economic threat in years to come, one must reckon with the continuing importance of Marxist dogma in Communist policies. Capitalism is still pictured as driven to imperialism and wars as "solutions" for the problem of overproduction. And militant Marxism still believes that the Soviet-Chinese "avant garde" has the mission of supporting the Communist struggle everywhere in the world, by whatever means are available and whenever it is promising.

In the underdeveloped countries the Soviets have been at least partly successful posing in the role of the advocates and supporters of rapid economic growth and independence in contrast to the West, which is pictured as advocating "go slow" policies and using these countries as a "dumping ground" for surplus products.

The analysis of the Soviet economic threat raises a number of policy questions:

1. Without engaging in a gross national product race, what can the U.S. Government, business, and labor do to support a rate of growth adequate to meet the urgent requirements in defense and nondefense, domestic and international?

2. What defense posture is needed to convince the Soviets that every aggressive move at the center, or the periphery, will be met by force?

3. What foreign programs are best suited to support effectively economic development in underdeveloped countries in a manner which convinces these countries that they will remain masters of their own destinies?

4. How can we make the world understand that we are developing an economic system suitable to meet the material and nonmaterial requirements of our age and still recognize that other countries may need institutions and policies different from our own?

1. INTRODUCTION: THE MEANING OF "ECONOMIC THREAT"

Classical economics suggested, and the 19th century experience by and large confirmed, the view that economic gains in one country bring economic advantages also to other countries. This theory and experience were in contrast with the views and historical facts of the earlier period of mercantilism when the ascendancy of one empire usually was associated with the decline of another

However, even in the 19th and 20th centuries economic power has often continued to be used as an instrument of political power, as when economic penetration served as a first phase of colonial domination. To that extent, economic growth may have involved conflicts among various national interests. Also, industrial development in one country often forced other countries to make painful readjustments in their own production and trade. Nevertheless, on balance it is still true today that a nation can gain more by economic prosperity in other nations than by their economic stagnation or deterioration.

This applies clearly to the economic relationships among the nations of the free world. But does it apply also to the relationships between the nations of the free world and the Soviet bloc?

The subject of these hearings could be interpreted as suggesting that economic development of the countries under Soviet rule in itself presents a threat to the non-Soviet world. This is not a necessary interpretation of the Soviet economic threat. On humanitarian grounds, an increase in the welfare of people anywhere would be welcome. Furthermore, domestic misery rarely has made a country easier to deal with. On the contrary, it must be our hope that a rising standard of living and growing economic maturity in the Soviet world will force its political leaders to change their attitudes and convert peaceful coexistence from a slogan to a reality. This, in turn, would also make it possible for the West to relax its defense effort and to devote a larger share of growing production to peaceful purposes.

Economic development in the Soviet bloc is a direct threat to the West to the extent that growing economic strength is used not for raising the standard of living and the welfare of the people but as support of an aggressive military and economic policy. It is an indirect threat to the extent that steady growth might appear to the underdeveloped countries as a predominant feature of the Communist system.

For appraising the free world's and particularly the U.S. political and economic defenses vis-a-vis the Communist threat, it is essential to have an evaluation of the Soviet bloc's probable economic development and of the likelihood that growing economic strength may be used in support of an aggressive military and economic policy. This paper will not deal with the full breadth of that problem. It will give a picture of Soviet economic development in the recent past and the outlook for the coming decade and discuss the relative economic capabilities of the Soviet Union and the United States. It will survey some of the uses which the Soviet Union has made of its growing economic strength for what has been called the "economic offensive." Finally, a few comments will be made evaluating the Soviet economic threat on the basis of these experiences of the past and raising some questions with respect to our own policy. In line with the subject of the hearings, the report will concentrate on the Soviet-United States relationship, with only occasional references to other Communist countries and the Soviet bloc and the free world as a whole.

2. SOVIET-UNITED STATES ECONOMIC STRENGTH

Comparative growth and coexistence

The very brashness with which Khrushchev and other Soviet leaders herald Soviet economic plans and attainments is perhaps sufficient to invite a healthy dose of skepticism. Economic pronouncements, no less than military claims, are clothed in threat and intimidation. In the past few years, however, it has become increasingly clear that loud claims, no matter how embellished by propaganda, have not been without demonstrable accomplishments. A broad range of achievements—from sputniks to economic activities in underdeveloped countries—attests to the resourcefulness and imagination of the Soviet Union. These events have understandably stirred the West into reassessing the adequacy of its own long-range policies.

In the economic field such reassessment has particular significance since it is in competitive coexistence of economic systems that the

Soviet Union has thrown down a major challenge to the West. An understanding of this challenge—if, indeed, it is only a challenge and not a threat—is basic to policy formulation designed to meet it. Accordingly, Western economists have, in the past few years, intensified their researches on Soviet bloc economic performance.

The reliability of Soviet statistics

By and large, such studies have benefited, in the period since Stalin's death, from a lessened degree of statistical exaggeration, though the very shift from a higher to a lower amount of statistical manipulation impairs historical economic comparisons. Alec Nove, in his study for the National Planning Association,[2] discusses reliability for three groups of Soviet economic statistics: (*a*) Industrial output statistics in physical terms, which, to the extent reported, he finds fairly reliable and for whose interpretation he advises "care rather than incredulity"; (*b*) agricultural statistics which are somewhat less reliable for a number of reasons—poor sampling, unreported home consumption, and the political importance of agriculture for Khrushchev's power status; and (*c*) indexes of industrial output and national income, which are regarded as least reliable for a variety of computational reasons, through here, too, current reporting is by no means pure invention, and while "firmly rejecting propagandist exploitation of unacceptable claims," we are asked not to "fall into the opposite error of ignoring current 'aggregate' claims entirely."

Unfortunately, it is precisely a long-term aggregative measure—item (*c*) above—which is necessarily for the construction of historical growth rates. Since Western scholars have necessarily had to construct such series from very scattered evidence and often by inference and personal judgment, it would be highly improbable to find complete unanimity in Western attempt to delineating Soviet rates of growth. Yet the vocal and frequently conflicting claims of different "schools of thought" should not obscure for us broad areas of agreement and reasonable deductions.

Soviet economic performance: Present, past and the outlook for 1959–65

The Soviet 7-year (1959–65) plan, adopted by the 21st Communist Party Congress early in 1959, calls for the following average annual rates of growth:

	Percent
Industrial production	8.8
National income	7.2

To judge the degree of realism in these objectives, it is necessary to relate them to some sort of historical trend line, one that takes in a period of at least some stability. Recounting the vast internal upheavals of the first several decades of Soviet power and wartime chaos, Alev Nove, in his NPA study cited earlier, writes:

> At the cost of stirring up some criticism, it seems not unreasonable to take the period 1951–55, extend it as far as possible to 1958, and base our future appraisal upon it, not by projecting the 1951–58 rate into the future but, rather, using it as a basis for comparison, as a period of relative normality, insofar as this word has any meaning at all.

[2] "Communist Economic Strategy: Soviet Growth and Capabilities," Washington, 1959.

A close examination of various Western analyses and of Soviet claims, which are rejected as being exaggerated by several percentage points, suggests that average annual rates of increase for the period 1951–58 may be cautiously put forth as follows:

	Percent
Industrial production	9½
National income	8 to 9

Does this achievement—if accurately gaged—cast doubt on Soviet plans? The Soviets themselves admit some slowdown. Is their allowance sufficient? Numerous "growth-inducing" factors of the recent past will contribute less in the future: the ruthless concentration on heavy industry—itself the instrument of fast growth—has to be somewhat mitigated; a growing share of output will be required for depreciation of capital; natural resources, while considered abundant, are more remote and will require greater capital investments for utilization; low wartime births will create a labor stringency for some years to come, with resultant need for very large productivity improvement; there is less scope for "borrowing" Western technology. On the other hand, agriculture, while still a weak link in the Soviet economy, will perhaps benefit from the switch "from coercion to incentives," and the Soviet educational effort of the past decade must be expected to bear some fruit. Balancing the pros and cons scarcely allows one to make an intelligent guess as to what real rates of growth will be. Without any attempt at precision, the balance of the evidence suggests the following orders of magnitude in average annual rates of growth:

	Percent
Industrial production	7 to 8
National income	6

It may be convenient to combine the Soviet claims and Western "guesstimates." This is done in table 1.

TABLE 1.—*Soviet growth 1951–58 and planned 1958–65: Claimed and "probable"*

[Average annual percentage rates of increase]

	1951–58		1958–65	
	Claim	"Probable"	Claim	"Probable"
Industrial production	11.9	9½	8.8	7–8
National income	10.1	8–9	7.2	6

Source: Alec Nove, "Communist Economic Strategy: Soviet Growth and Capabilities," Washington: National Planning Association, 1959.

Two observations are, perhaps, relevant: (1) Soviet claims—past and projected—are by no means outlandish compared to the Western "probable" estimates. (2) Even a declining rate of growth will, at the relatively high levels deemed reasonable, often yield impressive increases. This means, for example, that even with Soviet steel capacity equal to one-third that of the United States, a Soviet rate of increase three times as high as ours, will produce annual increments to output as high as those of the United States. The comparison cannot be made for recent years, since annual U.S. steel output has been falling ever since 1954 while that of the U.S.S.R. has risen over

30 percent over the same period. This illustrates, incidentally, the misleading conclusions which can be drawn from a "lag" analysis. Although current Soviet output of a given commodity may represent the U.S. level of 20 years ago, at growth rates considerable higher than ours (for that commodity), or with a rate of utilization greatly exceeding ours, the "catching up" period may be subsantially less than 20 years.

Soviet-U.S. economic comparisons: Aggregate and per capita; past and projected

This leads us into a brief comparison of Soviet economic performance with that of the United States. The preceding paragraphs attempted to throw some light on the Soviet economic record in terms of Soviet statistical concepts. "Industrial production" and "national income" are not comparable to similar terms employed in the West. The Soviet "industrial production" index, for example, is a gross—rather than net—concept which can, though need not necessarily, artificially exaggerate real output by organizational shifts in the economy. The Soviet "national income" concept, in addition to some conceptual difference with U.S. usage, suffers from being reported solely in terms of percentage changes.

In order to portray Soviet economic growth in the more familiar social accounting framework of the Western nations, we shall indicate what the previously cited data signify in terms of U.S. economic growth, expressed in GNP and its components. It should be carefully noted, however, that such a comparison involves even greater statistical hazards than does the unraveling of Soviet data in terms of Soviet concepts. To name only two difficulties, Soviet economists—in accord with Marxist theory—do not include certain services in aggregate production as we do in the West; and it is very difficult to translate Soviet output into dollars using exchange rates which adequately reflect purchasing power equivalents. Nevertheless, the comparison, presented in table 2, signifies the general order of magnitude.

TABLE 2.—*Comparison of United States and Soviet GNP, 1950–70*

	Actual				Projected		Average annual growth rate (percent)	
	1950	1955	1957	1958	1965	1970	1950–57	1957–70
Soviet GNP (billions 1958 dollars)	117	158	179	190	286	378	6.3	6.0
U.S. GNP (billions 1958 dollars)	352	435	452	442	633	790	3.6	4.4
Ratio U.S.S.R.: United States (percent)	33	36	40	43	45	48		
Soviet population (million)	182	198	204	207	233	250	1.6	1.5
U.S. population (million)	152	165	171	174	196	214	1.7	1.6
Soviet GNP per capita (1958 dollars)	643	798	877	918	1,227	1,512	4.5	4.3
U.S. GNP per capita (1958 dollars)	2,316	2,636	2,643	2,540	3,230	3,692	1.9	2.6
Ratio U.S.S.R.: United States (percent)	28	30	33	36	38	41		

Source: U.S. Department of State, "Soviet Economic Growth in the Struggle for the Underdeveloped World," unclassified document, Mar. 11, 1959. Data in this document have been converted from 1957 to 1958 values, and the U.S. GNP data slightly altered onthe basis of recent revisions. Projected Soviet figures are State Department estimates; projected U.S. data represent estimates of the National Planning Association.

The table serves to restore some perspective to United States-Soviet GNP comparisons. Particularly, the figures lend scant support to Khrushchev's boast of Soviet equality in per capita production by 1970. Even equality in total production by 1970 would require, on the one hand, still higher rates of growth for the Soviet economy than those projected in the table, and, on the other, stagnation in the U.S. economy. Yet, little complacency is called for. For example, had our tabulation of recent growth rates taken 1955 and 1958 (instead of 1950 and 1957) as terminal years, the United States would show virtual stagnation in GNP. On the other hand, the rate for Soviet GNP would be high no matter what combination of years had been chosen. And the "erratic nature of capitalist growth," of course, comes in for its share of Communist propaganda.

A similar point can be made for the years ahead. Projected data for U.S. GNP are based on reasonably full utilization of technology and manpower, and a pursuit of policies in support of economic growth. But suppose the actual rates of increase to 1970 averaged out to only about 3 percent. It would mean, should the Soviet Union be able to sustain its rate at about 6 percent, that annual increments to GNP would be as high in the U.S.S.R. by 1970 as in the United States. The impact of compound interest bears reckoning.

Uses of production: U.S.S.R. and United States

Table 2 showed that Soviet GNP, very approximately estimated at 40 percent of U.S. GNP in recent years, can be projected as approaching 50 percent by 1970; and per capita output, recently in the order of 33 percent, is shown as exceeding two-fifths by 1970. These data must be interpreted, however, in the light of the uses to which national productive capacity is put. A very approximate idea of United States versus Soviet expenditures for major components of GNP appears in table 3.

TABLE 3.—*Expenditures on major GNP categories, U.S.S.R. and United States, 1957*

	As percent of GNP		U.S.S.R. as percent of United States
	U.S.S.R.	United States	
Total GNP	100	100	40
Consumption [1]	60	67	29
Investment [1]	25	21	66
Industrial	(21)	(9)	(90)
National security	14	10	(2)
Government administration	2	2	40

[1] Including private and public.

[2] In addition to being an extremely rough comparison, the national security data should be qualified in a further sense. Shares of national security in GNP tell nothing of the relative destructive power of the resulting output. It is worth noting that (1) if Soviet military output, maintenance, and pay were valued at U.S. prices, the absolute money total of $40,000,000,000 would be about equal to the value of U.S. defense expenditures, and (2) that the Soviet armaments industry is considered to be among the most efficient of all its industries while its military personnel live much more modestly than U.S. soldiers. Consequently, the Soviet military establishment is described by the U.S. State Department as requiring "fewer resources to produce the same destructive power as its American counterpart." Similar conclusions were reached by the President's Committee To Study the U.S. Military Assistance Program (Draper Committee), Final Report, Aug. 17, 1959, p. 15. The Draper report does not give the basis for its estimate.

Source: U.S. Department of State, "United States Versus Soviet Spending for Major GNP Categories," Intelligence Information Brief No. 87 (unclassified), Feb. 24, 1959.

The relatively low ratio of Soviet to U.S. consumption (1: on a per capita basis) brings up the question whether increases in national product necessarily lead to higher living standards. In the early period of Soviet industrialization, substantial increases in total output were accompanied by a drastic fall in personal living standards. The plans of the Soviet leaders do, however, reflect the necessity to devote additional resources for improvements in standards of life. As Alec Nove remarks in his study for the National Planning Association:

> To admit that Communist chiefs are interested in welfare does not, of course, imply any kind of moral approbation. More than one dictator has taken much trouble to clothe, feed, and pay his men, and indeed this is usually best from his points of view. Farmers have been known to feed their animals well, too, without wishing to give them votes.

While centralized control seems effective in putting a brake on meeting the wishes of the people, as they can be expressed in a free-market Western economy, a higher priority than heretofore has now been assigned to an increase in agriculture, housing, and consumer goods production. If these efforts are carried through, some genuine improvement in consumption and housing appears likely.

Soviet consumption, in 1957, is seen to have been markedly lower than U.S. consumption, but investment—particularly in producer durables—came much closer to the U.S. total. Still, there is no 1950, and once again, we should note that a continued high share in military expenditures and investment need not rule out a gain in living standards. Even with its neglected relative position in Soviet GNP, substantial increases in total output can carry consumption forward to more respectable levels in the future.

3. ECONOMIC CAPACITY FOR WHAT?

Economic growth of the Soviet Union must be regarded as a threat to the extent that it adds to the economic capacity for increased armaments and for an expanded "economic offensive." If each nation could afford to spend only a certain percentage of total production—and not more—for armaments and other noneconomic purposes, the comparison between present and prospective levels of total production in the Soviet Union and United States would insure a superior U.S. potential. However, before too much comfort is derived from the comparison some important qualifications are needed.

First, the projections of total output for the United States (in table 2), which are based on the NPA's long-range projections, imply a GNP growth rate exceeding 4 percent. This growth rate appears feasible but is likely to be achieved only if government, business, and labor adopt measures in support of a higher rate of growth than that of the last few years.

Second, what may be more significant than the level of total production is the annual increase in total production. The difference in annual increments between the Soviet and the U.S. economy is declining faster than that in production levels of the two countries. Still, with an increase in the United States and U.S.S.R. as projected in our tables, the United States would maintain a considerable margin for years to come.

Third, military capabilities are not adequately measured by only aggregate production, actual or prospective. For instance, the scarcity of manpower in the 18 to 20 age group will pose a serious recruitment problem for the Soviets during the next few years and probably contributed to their efforts to develop manpower-saving technological methods both as weapons and in industrial production.

Fourth, and most important, what counts is not the increase in economic capabilities, irrespective of the method of measurement, as much as the allocation of resources to the satisfaction of consumers' welfare, to economically determined investments, and to political purposes. It was noted in the preceding section that, in spite of the much-lower level of total production, the Soviets devote a much-higher percentage of resources to defense than the United States. The United States certainly could economically support a higher level of expenditures for defense, but U.S. policymakers either believe that the world situation does not require a higher level of defense programs or that the people would not support such higher programs. In any case, the size of the defense effort is not directly related to economic capabilities but to decisions regarding national priorities which guide the allocation of resources. It was noted, in the preceding section, also, that the Soviets, for reason of domestic policy, will probably be impelled to increase the level of consumption. That share is still so low that a very substantial rise in the absolute and relative level of consumption is possible without preventing a simultaneous and substantial further rise in the level of defense expenditures. Thus, the Soviet defense effort certainly can be stepped up also if the leadership should determine that it would be in the Soviet interest. However, on grounds of economic capabilities, the United States could increase its effort even more, given the political determination that it is needed.

4. THE SO-CALLED SOVIET ECONOMIC OFFENSIVE

In recent years, the impression has been created that the Soviet military threat is supplemented by an economic offensive. In this respect three types of activities are prominently observed: The dumping of products on world markets, bulk purchases of commodities, and the extension of financial and tchnical assistance in general. Each of these activities will be briefly touched upon. It is worth noting, however, that frequently—and characteristically—the Communists have managed to coordinate these policies in a functional whole. This is particularly true of the second and third elements, that is, trade and aid.

Dumping of products on world markets

The principal examples are the exports of tin and aluminum sold for sterling in Europe. Nove believes that these sales were most immediately motivated by the Soviet effort to meet a substantial sterling deficit. Nevertheless, the disruptive effects of such forced sales remain no matter what the primary motive. A totalitarian regime always has the power—and a Communist regime also the trade organizations—to engage in such sales whether primarily motivated by economic or political considerations. Therefore, they must be expected to recur, possibly on a growing scale, in the future and meas-

ures, designed both to protect the economic defense of Western countries and viability of primary-producing countries, are called for to mitigate the disruptive effects of such sales.

Bulk purchases of products as a political instrument

The best known examples are the purchase of large quantities of cotton in Egypt, fish in Iceland, rice in Burma. Besides these striking instances, in which the political motivation was fairly evident, there are many other cases in which the political and economic elements are more interwoven. Soviet imports from many underdeveloped countries, particularly Latin America, the United Arab Republic, and India have increased rather sharply in recent years. To some extent, this increase in imports is related to domestic Soviet growth; to some extent, it is one aspect of the "aid with trade" program.

Between 1955 and 1958, Soviet gross national product is estimated to have risen about 20 percent, Soviet foreign trade turnover by about 30 percent. Soviet foreign trade is extraordinarily small in relation to gross national product (in the order of 3 percent), much lower than the relatively small proportion in the United States (4 to 5 percent). If trade restrictions in the West are relaxed, some increase in the proportion is likely to occur. However, in the longer run, Soviet trade policy, while somewhat freed from the rigidity of Stalinist isolation, is still very much guidde by autarchic thinking. The new 7-year plan sems to continue this marginal reliance on foreign trade. Even if trade remains the same low proportion of domestic production as heretofore, its relative position in world trade may rise, particularly in those areas where it is pushed.

Actually, the European satellite countries have generally played a greater role than the Soviet Union in foreign trade—always speaking in terms of trade relative to the rise of domestic production. Wszelaki [3] notes that "spectacular Asian journeys of Soviet leaders notwithstanding, it is the east-central European countries which have opened the Afro-Asian non-Communist markets to the Soviet bloc's economic offensive. * * * In 1955 the satellite area outranked the Soviet Union in Afro-Asian trade by about 4 to 1; the ratio in 1957 was still about 6 to 4." Lately, however, imports of the U.S.S.R. from nonindustrial areas have been approaching the level of the European Communist countries.

The complementarity between the U.S.S.R. and other industrialized bloc members and the underdeveloped areas of the world encourages this trade. Jute, raw cotton, wool, hides, fish, and some tropical foodstuffs all find an eager market in the bloc, and Soviet bloc experts of development goods find a ready market in underdeveloped countries. This does not mean that the U.S.S.R. would not wish to import many manufactured goods from the West. But it is severely limited by what it can export in exchange.

However, economic rationality does not govern all Communist trade policies. It has been evident that Communist China, both in her trade relations with Japan, and in her exports to southeast Asia, has used trade as an important political weapon, on balance perhaps to her

[3] "Communist Economic Strategy: The Role of East-Central Europe," Washington, National Planning Association, 1959.

economic detriment.[4] In final perspective, one must therefore assess economic and political factors in conjunction. Nove says: "The expansion of bloc trade with the underdeveloped world carries with it some very obvious political advantages. Certainly the development of economic ties gives political opportunities. It lessens dependence of these countries on the West, it has psychological-political consequences desirable from the Soviet point of view. This is particularly to the Soviet advantage if a given country has run into trouble with the West—as for instance was the case with Egypt and Iceland."

Soviet aid-with-trade programs

Total Soviet bloc economic credits and grants to underdeveloped countries, between June 30, 1954 and June 30, 1959, are estimated at $1,853 million which compares with credits and grants of at least $10 billion extended by the United States. The total number of Soviet technicians deployed on economic projects in underdeveloped countries was about 4,675 in early 1959 compared with about 6,000 from the United States. If the U.S. totals were combined with activities of other Western industrial nations and those of international agencies, the aggregate of free world economic assistance would be far greater than Soviet expenditures, which, in any case, lag conspicuously behind actual commitments. Thus, even though Soviet activities have been stpped up in the last year, the present level is far below that of the Western countries.

There is, however, the impression that the Soviets achieve more for each dollar spent than does the West. Henry Aubrey has dealt with the possible reasons for the apparent success of the Communist aid program in his paper for this committee. His main conclusions point to—

(*a*) Soviet and Chinese concentration of efforts on relatively few countries.

(*b*) Latent suspicions against Western assistance—particularly when linked to the private sector of the economy—that hark back to anticolonial and nationalistic sentiments.

(*c*) The image of aid "with strings" when it comes from the West, even though this identification is often more imagined than real, the product of the very bias mentioned under (*b*) above.

(*d*) The Communist emphasis on big industry, to which, underdeveloped countries, by virtue of their growth ambitions, are very receptive.

(*e*) The Soviet link of aid to trade, of special appeal to countries subject to recurrent difficulties in marketing commodity exports.

(*f*) The Soviet claim to "businesslike" low-interest loans, as opposed to "debasing" charitable grants, "hardship sales" of surplus food, or prohibitive rates of interest from the United States.

The "no strings attached" principle, so fatuously preached by the Soviets, has been violated in some conspicuous cases, such as the unilateral "postponement" of the $285 million credit to Yugoslavia, which the Yugoslav press described as "a purely political attempt to link economic aid with political considerations" and evidence that

[4] See H. Michael Sapir, "Japan, China, and the West"; and A. Doak Barnett, "Communist Economic Strategy: The Rise of Mainland China," both Washington: National Planning Association, 1959.

an agreement with the U.S.S.R. "will hold good only to the extent that Belgrade is ideologically acceptable." [5]

5. EVALUATION OF THE FUTURE ECONOMIC THREAT

Reviewing what the Soviets have undertaken in their "economic offensive" one could say that they have, in the pursuit of their foreign trade policies, occasionally arranged their exports and terms of financing in a manner that fits into their foreign policy objectives, namely: an attempt to drive a wedge between the Western countries and countries friendly toward the West; and to forge closer links between other countries and the Soviet orbit. In foreign aid, and particularly technical assistance, the Soviets have, on a smaller scale, initiated policies launched by the West a decade ago. Why should these activities be interpreted as a threat? Certainly the Soviets could step up these activities should they decide that they fit into Communist world strategy. In relation to total production, the outlays for these purposes are insignificant. Moreover, the same policies pursued by any other country might simply be interpreted as indicating that another nation is becoming one of the great world powers; it need hardly be interpreted as a threat for the rest of the world. Soviet bloc activities do appear as a threat only because they must be interpreted as elements in Soviet strategy. It must be assumed that this strategy is still influenced by important aspects of the Marx-Leninist creed.

1. Capitalist contradictions.—The capitalistic countries, according to the Marxist creed, cannot solve the problem of internal overproduction which drives them into the armaments race and the exploitation of foreign markets. According to Marx and Lenin, militarism and imperalism are the unavoidable consequence of internal capitalistic contradictions. Thus, Communists will always be suspicious of the foreign policies of countries which they label as capitalistic. They may not necessarily question the personal motivations of Western leaders, but condescendingly regard these leaders as people who are unaware of the forces which will drive them sooner or later into an aggressive policy.

2. Militant communism.—The Communist creed is revolutionary. A Communist must believe the Communist system of production is superior to any other social and economic system and that it will in the end prevail on the entire globe. The victory of communism does not, however, simply come about by the collapse of the other systems. Just as a small Bolshevik "elite" first established a dictatorship over the majority of the Russian people, so the Communist minority of nations, representing the "avent-garde" of communism, feels itself bound to assist the historical process by all means available. Thus, the slogan of "competitive coexistence" is incompatible with the Marx-Leninist doctrine even though the strategies of militant communism may be adapted to changing circumstances. With the development of a nuclear statemate, it is likely that the emphasis will shift from all-out war to local "incidents" and to economic warfare.

The theory of imminent imperialistic tendencies in capitalism leads the Communists to maintain a strong defense at all times. The exact

[5] Quotation cited by U.S. Department of State, "The Communist Economic Threat," publication 6,777, March 1959, p. 22.

time when history will call on them to perform their midwife services in the birth of communism in one particular country or all over the globe depends on the interpretation of whether circumstances are ripe for the final push. Thus, if an underdeveloped country, with a government now friendly to the West, fails in solving pressing economic and social problems, it may, in the wake of rising discontent and political instability, easily become a fertile ground for Communist agitation and possible "internal" revolution with whatever "outside" assistance may be needed.

In the light of these elements of the Marx-Leninist creed it may appear hopeless that the threat can ever be removed short of total—and suicidal—war. The only ray of hope can be derived from the fact that there have been other powerful movements in history which felt that they had the mission of conquering the world. When these movements realized that their goals were unattainable they gradually adapted themselves to less aggressive objectives.

However, there are not yet clear indications that we are near that situation with respect to the Communist bloc. There are no signs of any compromising, particularly on the side of Communist China, which is still in the unmitigated phase of militant communism.

It must be the aim of Western policy to impress the Communist leaders with the futility of any aggressive move and at the same time express the willingness to deal with them as great powers if they drop their aggressive aims. It is a fact that nations like the U.S.S.R. or China are not merely embodiments to the Marx-Leninist ideology but are also countries beset with the ordinary problems any growing nation has to meet. These problems are determined by history, geography, size, character of population, and economic resources. The essential question is whether the Communist ideology remains the guiding spirit of the Soviet system determining its world strategy or whether this ideology will be gradually relegated to oratorical use, with strategy becoming more comparable to that of any other great power. If the latter becomes the case, international problems do not disappear but they become manageable.

The aggressive Marx-Leninist strategy can be contained only if the Soviet people and their leaders realize that different systems of political, economic, and social structure can be equally or more effective than communism and that these other systems need not resort to aggression in order to postpone their own disintegration. The Soviet leaders would have to be convinced that the rival systems, far from disintegrating, are not "pushovers" but are ready to meet force with force.

At the same time, the spreading of communism to the uncommitted countries can be prevented if the leaders and the people of these countries firmly recognize (1) that the Communist system does not have a monopoly on fast growth and maximization of welfare; (2) that planning is not a monopoly of communism but that there can be developed what we might call "democratic planning"; and (3) that they nevertheless have a free choice in developing their resources in accord with their own needs and in the manner which they believe is most suitable for them.

6. U.S. POLICY QUESTIONS RAISED BY THE SOVIET ECONOMIC THREAT

From the preceding evaluation, it follows that Western strategy must be designed to meet two interrelated challenges, namely (1) the worldwide strategy of communism based on the conviction that sooner or later all countries "must" become communistic, with or without "help" from the Soviet regime; and (2) the fact that the U.S.S.R. has entered the group of great industrial nations. These are formidable issues, and in the present paper we can hardly do them full justice. We have chosen to limit ourselves to some of the questions that these issues raise for U.S. economic policy.

1. From what we have said about the nature of the Soviet economic threat it should be clear that an economic growth race per se would not contribute to meeting the Soviet threat. There is, however, a big difference between engaging in a "gross national product race" and promoting a rate of steady economic growth which would permit meeting the needs of national security and, at the same time, enable desirable increases in the standard of living and pursuit of other economic and social objectives. Such a rate of growth, appropriate in the light of U.S. conditions and objectives, would be less than the current or prospective Soviet rate of growth, but higher than the rate of growth of the U.S. economy in recent years.

Nothing has helped the Soviets in the underdeveloped countries as much as the fact that they can point to their success in industrial development (without, of course, mentioning the sacrifices in human lives and freedom). For the Western countries it is of utmost importance to demonstrate that they are developing an economic system to which the Marxist theory of inevitable decay is not applicable and which promises to eliminate poverty without sacrifice of human dignity and freedom.

Through the incessant emphasis on growth, theirs and others, the Communists, so to say, appropriate for themselves the advocacy of fast growth, while the West may find itself maneuvered into the role of pursuing "go slow" policies, for themselves and the new countries, too. Thus, the Communists identify themselves with a dynamic aspiration bordering on obsession in many new countries, and the West is cast in the role of the aging generation that can no longer grasp, and seems not to care, what to the younger peoples appears to be the most vital need.[6]

It is not necessary to discuss here the policies which could promote a steady rate of economic growth because the Joint Economic Committee is devoting a special study to this crucial task. However, it cannot be emphasized enough that a satisfactory solution of our domestic economic problems would make a most important contribution to our international problem. The relative neglect of policies encouraging higher growth among the Western nations in the past few years was recently commented upon by the U.N. Secretary General when he asked: "Are we not, perhaps, rather inclined to resolve the conflict between stability and growth too exclusively in favor of stability—to

[6] This subject receives more elaborate treatment in Henry G. Aubrey's forthcoming summary volume growing out of the National Planning Association's project on the "Economics of Competitive Coexistence."

the detriment of the vigor and dynamism so characteristic of the world economy during the first postwar decade?" [7]

2. It is hard to say what portion of our natural resources has to be devoted to national security and military and economic foreign assistance. But it is important for Americans to recognize that our productive resources are adequate for any requirement needed to meet the Soviet threat. The Soviets, too, must recognize that we can stand an armaments race better than they can, so that it becomes more prudent not to engage in it.

3. It is important that the conviction in underdeveloped and politically noncommitted countries is maintained that they are masters over their own destinies. Technical assistance should give them advice about methods for planning their best use of resources. We should recognize that economic and social policies under conditions of extreme scarcity of capital will be different than those in the United States where we are enjoying relative capital abundance. How far governments must go in supporting economic development should be decided by these countries and their governments. The only "strings" that we should attach to our assistance should be that our support is directed to economically and socially justified and soundly conceived projects.

But assistance to underdeveloped countries implies more than the extension of credits and the recruiting of staff for technical missions. It requires a much greater effort in training a large number of technicians for effective service abroad and orienting some part of our own research effort toward the problems to be met in the underdeveloped countries.

The Soviets have been skillful in exploiting the impression that the United States tries to promote the export of our specific political and economic institutions along with foreign aid. In contrast, the Soviets have attempted to create the impression that their aid is given without political motivation and without any strings attached (except when they canceled credits for political reasons). It requires great tact to let the world know about, and profit from, American experience and yet recognize the different political, social, and economic conditions in other countries which often require different approaches.

In conclusion, the Soviet threat requires two kinds of long-range measures: first, to discourage any offensive move by Soviet knowledge that we are devoting to defense whatever portion of our resources is needed to meet force with force; and second, to conduct a vigorous domestic and foreign economic policy as required by the objectives which we should pursue even in the absence of the Soviet threat—only in a more perfect manner, realizing that every failure on our side will be exploited by the Soviets and turned to their advantage in their long-range strategy.

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[7] Statement by United Nations Secretary General Dag Hammarskjold before the Economic and Social Council at Geneva, in July 1959.

Because of printing complications, the paper of Mr. Jay Lovestone, director of international publications, AFL–CIO, could not be included in part II with the rest of the papers from private policymakers. This paper will appear in part III of the panelists' papers.