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ECONOMIC INTELLIGENCE REPORT

ECONOMIC RELATIONS OF COMMUNIST CHINA
WITH THE USSR SINCE 1950



CIA/RR 59-16
May 1959

CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

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ECONOMIC RELATIONS OF COMMUNIST CHINA WITH THE USSR
SINCE 1950*

Summary and Conclusions

Communist China achieved remarkable progress during 1950-57 in its program of rapid industrialization and militarization, primarily because of the economic, military, technical, and industrial support received from the USSR. During the First Five Year Plan (1953-57), Communist China depended on the USSR for the bulk of its imports of industrial equipment. The projects constructed with Soviet assistance during 1953-56 in the coal, electric power, iron, steel, copper, aluminum, and the lathe-machine manufacturing industries accounted for 30 to 90 percent of newly added productive capabilities of these industries in China.

Although East Germany replaced Communist China as the largest single trading partner of the USSR in 1957, Communist China and the USSR normally are the principal trading partners of each other. The value of Sino-Soviet trade increased from \$320 million** in 1950 to a maximum of \$1,705 million in 1955 (but this included \$330 million estimated to be the value of military materials and joint-stock company assets turned over to China in 1955). In 1957, Sino-Soviet trade was at a level of about \$1,290 million. Provisional information for 1958, however, indicates that trade increased by 18 percent above that in 1957 to a level of about \$1,515 million. During 1950-57, China accumulated a trade deficit of \$781 million with the USSR. China had a small export surplus of \$30 million in 1956, a more substantial surplus in 1957 amounting to \$196 million, and a surplus in 1958 of about \$300 million. During the next several years, as China continues to repay Soviet loans and credits, China probably will continue to have substantial export surpluses in its trade with the USSR.

Since 1950 the USSR has extended loans to Communist China amounting to about \$1,325 million. Loans for economic development amounted to \$430 million, special loans covering the return to Chinese ownership of the four Sino-Soviet joint stock companies accounted for an amount estimated at \$75 million, and the remainder represented military loans of \$820 million. China is estimated to have repaid \$482 million of the total of Soviet credits received by the end of 1957. An additional sum

* The estimates and conclusions in this report represent the best judgment of this Office as of 15 April 1959.

** Dollar values in this report are in terms of US dollars.

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amounting to about \$190 million was scheduled to be repaid in 1958. Repayment obligations have placed a heavy burden on Chinese resources. The greater portion of China's debt amortization to date probably has represented repayment of Soviet military loans.

Sino-Soviet relations have been greatly strengthened as a result of the willingness of the USSR to supply equipment and technical services valued at about \$3.3 billion for the construction of major industrial enterprises in Communist China. Of the 211 major installations which the USSR agreed to furnish under arrangements announced before 1959, 67 have been fully or partially completed. The remainder of these projects -- which are the core of China's industrialization program -- are scheduled to be completed during the Second Five Year Plan (1958-62). A new agreement was announced in February 1959 calling for Soviet deliveries through 1967 of 78 additional projects, for which the equipment and technical assistance is valued at about \$1.3 billion. Economic credits of \$430 million have been fully drawn on to cover a part of the cost of the equipment and services for Soviet projects. The remainder of the cost is being paid for by China from its earnings in current trade with the USSR.

Soviet technical assistance has been extended to all levels and to all branches of the Chinese Communist economy, although the precise number of Soviet advisers, specialists, and technicians in China is not known. In 1950, China required a greater number of Soviet technicians because of its low level of industrial competence. Moreover, the entrance of China into the Korean War necessitated temporary reliance on a large number of Soviet military specialists and advisers. The subsequent development of technically trained Chinese has since permitted a sharp reduction in the number of Soviet specialists and technicians.

China was the first major Asian nation to fall under Communist domination and to apply Communist totalitarian methods to the promotion of economic development. If China can accomplish a sharp rise in per capita income and show substantial economic progress, the impact of this success will be felt throughout Asia. Thus Sino-Soviet economic relations will play an influential role in determining the future of the Communist system in all Asia as well as in China.

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I. Foreign Trade of Communist China.

Since the assumption of Communist control over the mainland in October 1959, China has consistently relied on imports of capital equipment, military goods, ferrous metals, and petroleum in order to carry out its plans for rapid industrialization and military modernization. The foreign trade turnover during the years 1950-57 averaged about 10 percent of the gross national product (GNP) of Communist China, and imports varied between 5 and 7 percent of the GNP.

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The Soviet Bloc now accounts for about two-thirds of the total trade of Communist China, and the USSR has become the principal trading partner of China in contrast to pre-Communist days, when the volume of Soviet trade with China was small. Between 1917 and 1936 the trade of the USSR with China reached a peak in 1928, when it amounted to 5.4 percent of total Chinese foreign trade, whereas in some prewar years it was below 1 percent. 2/

In 1950 the USSR accounted for more than 26 percent (\$320 million) of the total trade of Communist China of \$1,215 million. The peak year for Sino-Soviet trade was 1955, when the total trade of China was valued at \$3,065 million, of which the USSR accounted for \$1,705 million, or 56 percent. Included in this trade, however, were the special acquisitions by China (transfer of the Soviet shares in four joint-stock companies and the receipt of military materials at Port Arthur when the Russians withdrew) which were financed by Soviet credits. In 1956 the share of the USSR in the total trade of China dropped to 47 percent, or \$1,460 million, thereby reflecting the absence of special Soviet loans. Nevertheless, excluding special loans and credits in 1955 which probably amounted to \$330 million, Sino-Soviet trade on current account in 1956 actually increased over 1955. In 1957, Sino-Soviet trade declined by about 12 percent, amounting to \$1,290 million. This decline may be attributed primarily to a 24-percent reduction in Chinese imports of military goods, machinery and equipment, and ferrous metals. The rather drastic curtailment of imports from the USSR in 1957 reflected certain adjustments undertaken in the Chinese economy which resulted in reduced capital investment and greater dependence on its own resources. An arrangement was made with the USSR which enabled China to expand its exports of industrial goods, ores and concentrates, and consumer goods to compensate for a temporary reduction of the usual exports of agricultural raw materials and foodstuffs. The "leap forward" drive of the Chinese apparently influenced Sino-Soviet trade in 1958, which, according to preliminary information, amounted to about \$1,515 million, or an increase of 18 percent above that in 1957.

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The estimated dollar value and percentage distribution of the foreign trade of Communist China during 1950-58 are indicated in Tables 1* and 2.** (For a chart showing the geographic distribution of the foreign trade of Communist China by dollar value in 1950, 1955, and 1958, see Figure 1.***)

The composition of trade between Communist China and the USSR reflects the complementary natures of the two economies. Thus Soviet exports consist largely of machinery and equipment for China's industrialization program, and China's exports to the USSR are primarily foodstuffs and raw materials. Soviet exports of capital goods, however, provide a priority contribution to China's industrialization program, whereas many of China's exports to the USSR have no direct bearing on Soviet industrial production. The Chinese have indicated, for example, that certain exports have been accepted by the USSR primarily as a matter of accommodation to China.

Chinese exports of such commodities as tin, rubber, and tungsten, on the other hand, are extremely valuable to the USSR, inasmuch as these items are not available in sufficient volume from Soviet resources to satisfy internal requirements. By obtaining such commodities from China, the USSR fulfills a critical need and at the same time conserves its own foreign exchange holdings. Moreover, about 50 percent of Soviet exports to China during 1950-55 are believed to have consisted of military items which have not contributed to the development of the Chinese economy. Military goods inherently have a high obsolescence factor; nevertheless, China is required to reciprocate with substantial exports of useful and valuable foodstuffs, minerals, and consumer goods to repay the USSR for these military goods.

Chinese imports of industrial equipment and complete installations from the USSR have made a major contribution to the economic development of China. During the First Five Year Plan (1953-57), China imported about 40 percent of its capital equipment requirements, of which more than one-half came from the USSR. ^{3/} Among the other major imports from the USSR during this period, Communist China received more than 6.5 million tons of petroleum and petroleum products; more than 2 million tons of steel (including castings, prefabricated steel, and other such products); about 3,000 metal-cutting lathes; more than 2 million tons of ferrous metals; approximately 10,000 agricultural machines; about \$25 million

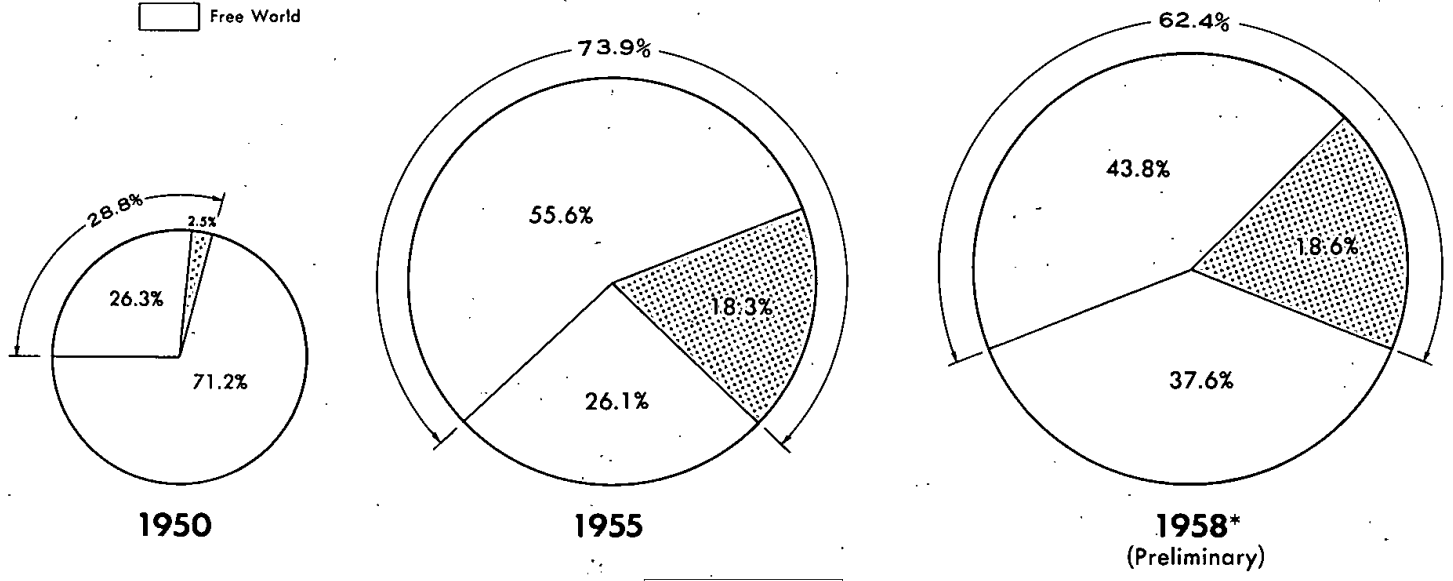
* Table 1 follows on p. 5.

** Table 2 follows on p. 6.

*** Following p. 4.

COMMUNIST CHINA
PERCENTAGE DISTRIBUTION OF FOREIGN TRADE
BY DOLLAR VALUE, 1950, 1955, and 1958*

USSR
Other Bloc
Free World



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Table 1
Dollar Value of the Foreign Trade of Communist China a/
1950-58

	Million US \$								
	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u> (Preliminary)
Bloc trade									
USSR	320	750	965	1,170	1,275	1,705	1,460	1,290	1,515
European Satellites	20	205	320	345	375	430	465	485	550
Far Eastern Satellites	5	20	30	50	90	125	120	125	95
Subtotal b/	<u>350</u>	<u>970</u>	<u>1,315</u>	<u>1,565</u>	<u>1,740</u>	<u>2,265</u>	<u>2,045</u>	<u>1,895</u>	<u>2,160</u>
Free World trade	<u>865</u>	<u>920</u>	<u>580</u>	<u>750</u>	<u>625</u>	<u>800</u>	<u>1,090</u>	<u>1,140</u>	<u>1,300</u>
Total	<u>1,215</u>	<u>1,890</u>	<u>1,895</u>	<u>2,315</u>	<u>2,365</u>	<u>3,065</u>	<u>3,135</u>	<u>3,035</u>	<u>3,460</u>

a. Based primarily on trade information released by Communist China, which apparently has adopted a dual conversion ratio for foreign trade. The dollar value of trade with the USSR and other Bloc countries is derived by applying the conversion ratio of 1 yuan to 1 ruble, which is equivalent as a cross rate to a conversion ratio of 4 yuan to US \$1. The dollar value of trade with the Free World is derived from the conversion ratio of 2.46 yuan to US \$1.

b. Subtotals may not agree with the sum of their rounded components. Figures are rounded to the nearest 5 million.

Table 2
 Percentage Distribution of the Foreign Trade of Communist China
 by Dollar Value ^{a/}
 1950-58

	Percent								
	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u> (Preliminary)
Sino-Soviet Bloc trade									
USSR	26.3	39.7	50.9	50.5	53.9	55.6	46.6	42.5	43.8
European Satellites	1.7	10.8	16.9	14.9	15.9	14.0	14.8	15.9	15.9
Far Eastern Satellites	0.4	1.1	1.6	2.2	3.8	4.1	3.8	4.1	2.7
Subtotal ^{b/}	<u>28.8</u>	<u>51.3</u>	<u>69.4</u>	<u>67.6</u>	<u>73.6</u>	<u>73.9</u>	<u>65.2</u>	<u>62.4</u>	<u>62.4</u>
Free World trade	<u>71.2</u>	<u>48.7</u>	<u>30.6</u>	<u>32.4</u>	<u>26.4</u>	<u>26.1</u>	<u>34.8</u>	<u>37.6</u>	<u>37.6</u>
Total trade	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

a. Because of the dual conversion rate system used by China, these figures differ from those announced by the Chinese on distribution of the yuan value of trade.
 b. Subtotals may not agree with the sum of their rounded components.

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worth of scientific apparatus; and large amounts of other equipment needed for the industrialization program of China.* 4/

The major Chinese exports to the USSR continue to be agricultural products, but there has been a significant shift in the relative importance of agricultural raw materials and foodstuffs. Shipments of agricultural raw materials -- principally tobacco, soybeans, peanuts, tung oil, and oilseeds -- declined from about 36 percent of total exports to the USSR in 1950 to about 18 percent of total exports to the USSR in 1957, even though the value of this category of exports almost doubled between 1950 and 1957. Foodstuffs (principally wheat, rice, tea, spices, meat and dairy products, fish, vegetables, fruits, and edible vegetable oils), on the other hand, increased from about 12 percent of total exports to the USSR in 1950 to 17 percent in 1957, representing a fivefold value increase.

The other principal Chinese exports to the USSR are nonferrous metals and alloys, textiles, and textile raw materials. Certain Chinese exports to the USSR are showing a growing importance in recent years. For example, natural rubber (which is a reexport) and building materials account for more than \$50 million of Chinese exports in 1957.

In the future the pattern for Communist China's trade with the USSR probably will be guided by the desire for increased reliance on internal resources. This attitude may be reflected in a gradual decrease in the percentage of complete installations as a portion of total imports of equipment and machinery from the USSR after the completion of the Second Five Year Plan (1958-62). It is also expected, however, that Sino-Soviet trade will continue to grow in absolute terms during this period and that the USSR will continue to be the principal trading partner of Communist China. The Chinese have indicated the intention of increasing the import of materials required for industrial and agricultural production such as petroleum and petroleum products. There may be a slight increase in the import of other items such as chemicals, pharmaceuticals, and certain types of consumer goods.

Trade between Communist China and the USSR which, in the past, has expanded relative to the growth of China's GNP should continue to increase. China's exports likewise should follow a similar pattern and grow at a rate of about 8 percent annually. In order for China to pay for its current imports and, in addition, to repay the USSR military and economic developmental credits previously extended, the Chinese will be required to maintain large export surpluses with the USSR, particularly

* The imports and exports exchanged between Communist China and the USSR during 1950-57 are shown in Appendix A, Tables 7 and 8, pp. 20 and 22, respectively, below. Significant changes in the composition of this trade are illustrated in Figure 2, following p. 8.

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through 1962. Although agricultural products will continue to be the major Chinese exports to the USSR, it is probable that exports of minerals, metals, and light industrial products (particularly textiles) will be increased.

II. Financing Sino-Soviet Commodity Trade, 1950-58.

During 1950-57 the value of total trade between China and the USSR amounted to \$8.9 billion. China exported goods valued at \$4.1 billion to the USSR and in turn received goods from the USSR valued at \$4.8 billion. This balance-of-trade position resulted in a cumulative trade deficit for China of \$781 million for 1950-57 (see Table 3). Preliminary information for 1958 indicates that China may have an export surplus of \$299 million in trade with the USSR.

Except for 1950, 1956, 1957, and 1958 the imports of Communist China from the USSR have exceeded its exports to the USSR. Part of the aggregate trade deficit accumulated during 1950-57 was financed by industrial credits, and part apparently was financed by military credits.

Table 3

Value of Imports, Exports, and Trade Balances of Communist China
with the USSR as Reported by Communist China a/
1950-58

Million US \$				
<u>Year</u>	<u>Exports</u>	<u>Imports</u>	<u>Total Trade</u>	<u>Trade Balance</u>
1950	183	137	320	46
1951	308	442	750	-134
1952	413	552	965	-139
1953	474	696	1,170	-222
1954	575	700	1,275	-125
1955	636	1,069	1,705	-433
1956	745	715	1,460	30
1957	743	547	1,290	196
1958 (Preliminary)	907	608	1,515	299
Total	<u>\$4,984</u>	<u>\$5,466</u>	<u>\$10,450</u>	<u>-482</u>

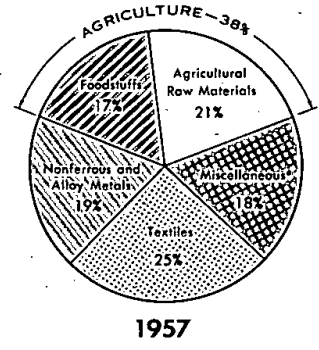
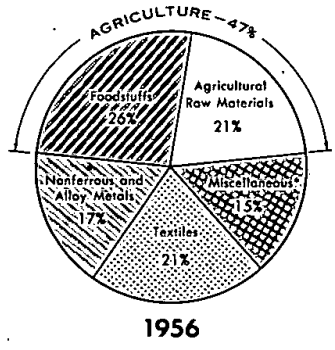
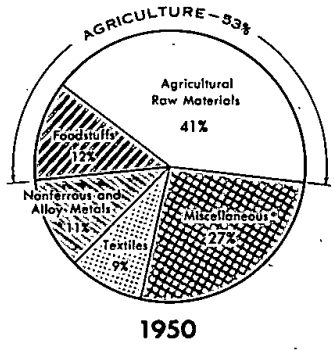
a. Derived from trade information released by Communist China.
For comparison with Sino-Soviet trade figures reported by the USSR,
see Appendix B, Table 9, p. 26, below.

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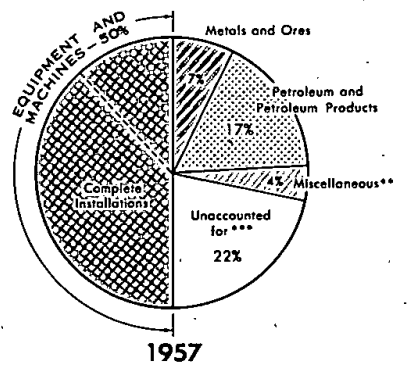
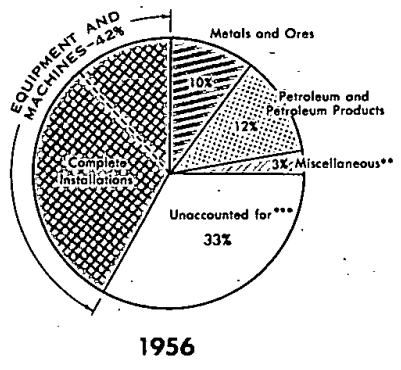
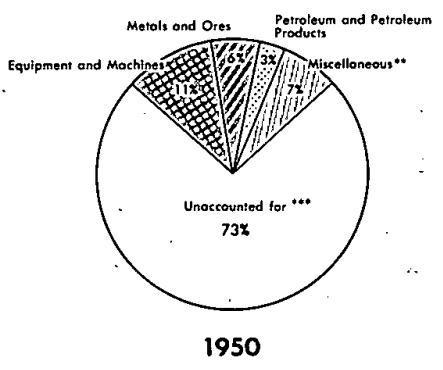
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COMMODITY COMPOSITION OF TRADE BETWEEN COMMUNIST CHINA AND THE USSR, 1950, 1956, and 1957

CHINESE EXPORTS



CHINESE IMPORTS



* Miscellaneous Chinese exports includes such categories as industrial goods, industrial raw materials, chemicals and rubber, and cultural and consumer goods.
 ** Miscellaneous Chinese imports includes such categories as chemicals, building materials, pharmaceuticals, and cultural and consumer goods.

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During 1951-55, when Communist China incurred an import surplus each year in its trade with the USSR, the amounts were uniform with the exceptions of 1953 and 1955. In these years the large import surplus probably represented large amounts of military goods delivered to China by the USSR. These deliveries may have resulted from orders placed by China for Soviet military equipment during the Korean War. In 1955, when Soviet forces withdrew from Port Arthur, Manchuria, the USSR turned over military goods to China under a loan estimated at \$255 million. In addition to the military material included in 1955 imports from the USSR were \$75 million representing Soviet shares in the four Sino-Soviet joint stock companies retroceded to China in 1955.

In 1956, Communist China reversed its balance-of-trade position with the USSR, resulting in a trade surplus of about \$30 million, and an even larger surplus amounting to \$196 million was achieved in 1957. Provisional information for 1958 indicates that Communist China has accumulated a surplus of about \$300 million in its trade with the USSR. An export surplus in Chinese trade with the USSR should continue, reflecting repayment of Soviet loans and credits.

Information regarding nontrade items is not sufficiently comprehensive to permit an estimate to be made of the over-all balance of payments between the USSR and Communist China. It is apparent, however, that the deficit in commodity trade was the most important element in the Sino-Soviet balance of payments and that the annual trade deficits undoubtedly were compensated by drawing on Soviet military and industrial credits. During 1950-57 the USSR has extended military and economic credits amounting to about \$1,325 million. Thus drawings on Soviet credits were more than adequate to compensate for the cumulative trade deficit of \$781 million. The Soviet loans to Communist China during 1950-58, including utilization and repayment by China, are summarized in Table 4.* The balance of trade of Communist China with the USSR for 1950-58 is shown in Figure 3.** The utilization and repayment by Communist China of Soviet loans and the relationship to balance of trade are shown in Figure 4.**

III. Soviet Economic Aid to Communist China.

A. Industrial Projects.

The keystone of Sino-Soviet economic relations during the First Five Year Plan has been the 211 major projects being built with Soviet aid and technical assistance. These projects have strengthened Sino-Soviet relations and have become the core of the industrialization

* Table 4 follows on p. 10.

** Following p. 10.

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Table 4

Estimated Utilization and Repayments of Soviet Loans
to Communist China
1950-58

Million US \$

Year	Loans <u>a/</u>	Utilization		Repayments by China
		Industrial	Military and Other	
1950-52	544	166	378	0
1953	110	67	43	0
1954	221	78	143	35
1955	414	84	330 <u>b/</u>	130
1956	29	29	0	150
1957	6	6	0	167
1958	0	0	0	190 <u>c/</u>
Total <u>d/</u>	<u>1,325</u>	<u>430</u>	<u>895</u>	<u>672</u>

a. Soviet loans to China during 1950-57 amounted to 5,294 million yuan and were converted at an exchange ratio of 4 yuan to US \$1.

b. Including \$75 million estimated to be the value of assets of joint-stock companies returned to China by the USSR.

c. Amount planned for repayment in 1958.

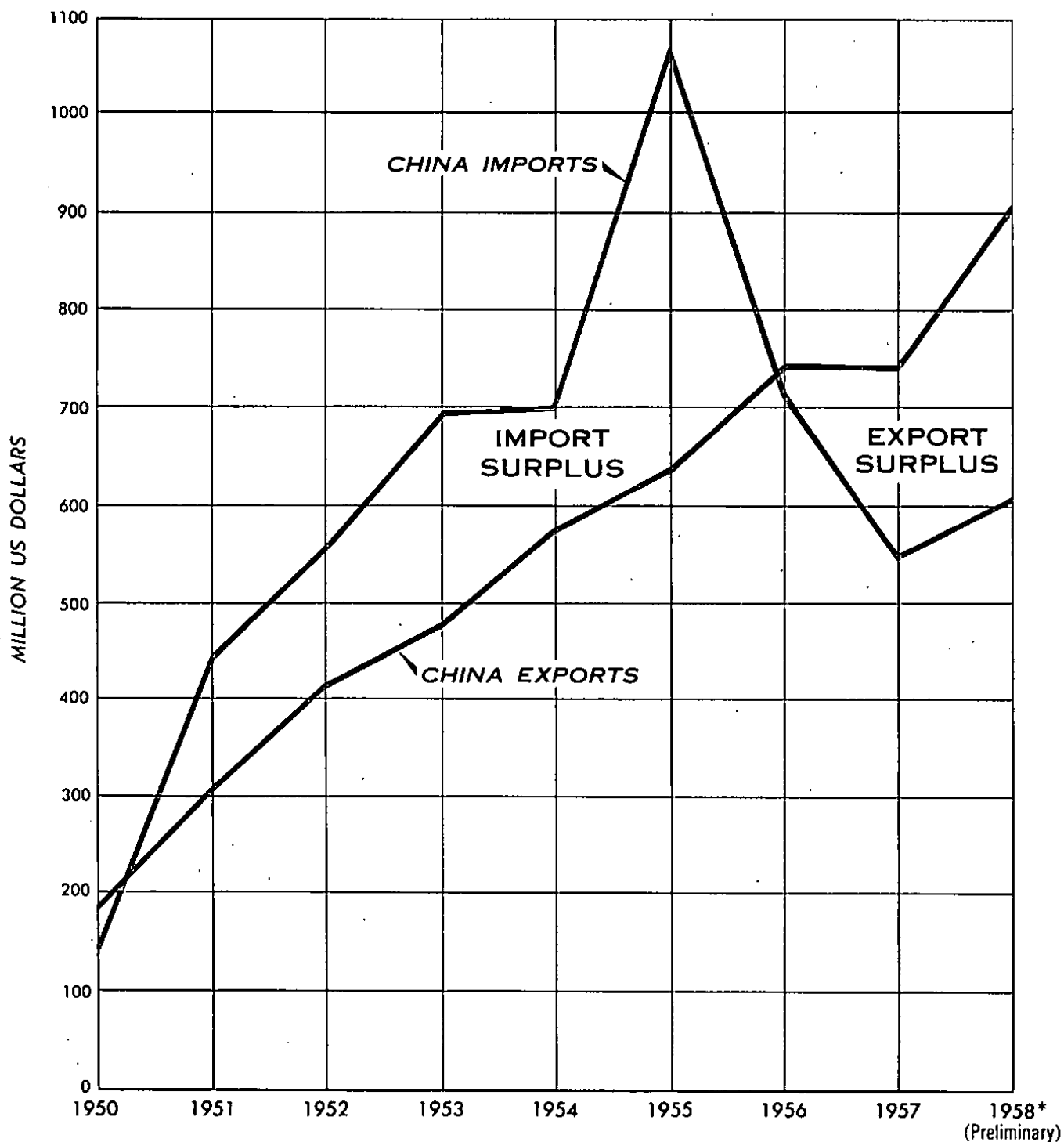
d. Totals may not agree with the sum of their rounded components.

program of Communist China. The need for machinery and equipment for these projects insures that the USSR will continue to be the leading trade partner of China during the Second Five Year Plan (1958-62). The USSR has announced that the total cost of industrial equipment and technical services to be furnished China for these 211 industrial projects is \$2,025 million, financed in part by Soviet loans of \$430 million. 5/ Consequently, it appears that only about 20 percent of the total foreign exchange costs of these projects is covered by Soviet credits.

Soviet participation in the industrialization program of Communist China began in 1950 after the signing of the Sino-Soviet Treaty of Friendship, Alliance, and Mutual Assistance. Under this pact the USSR agreed to supply China with equipment and other materials for the

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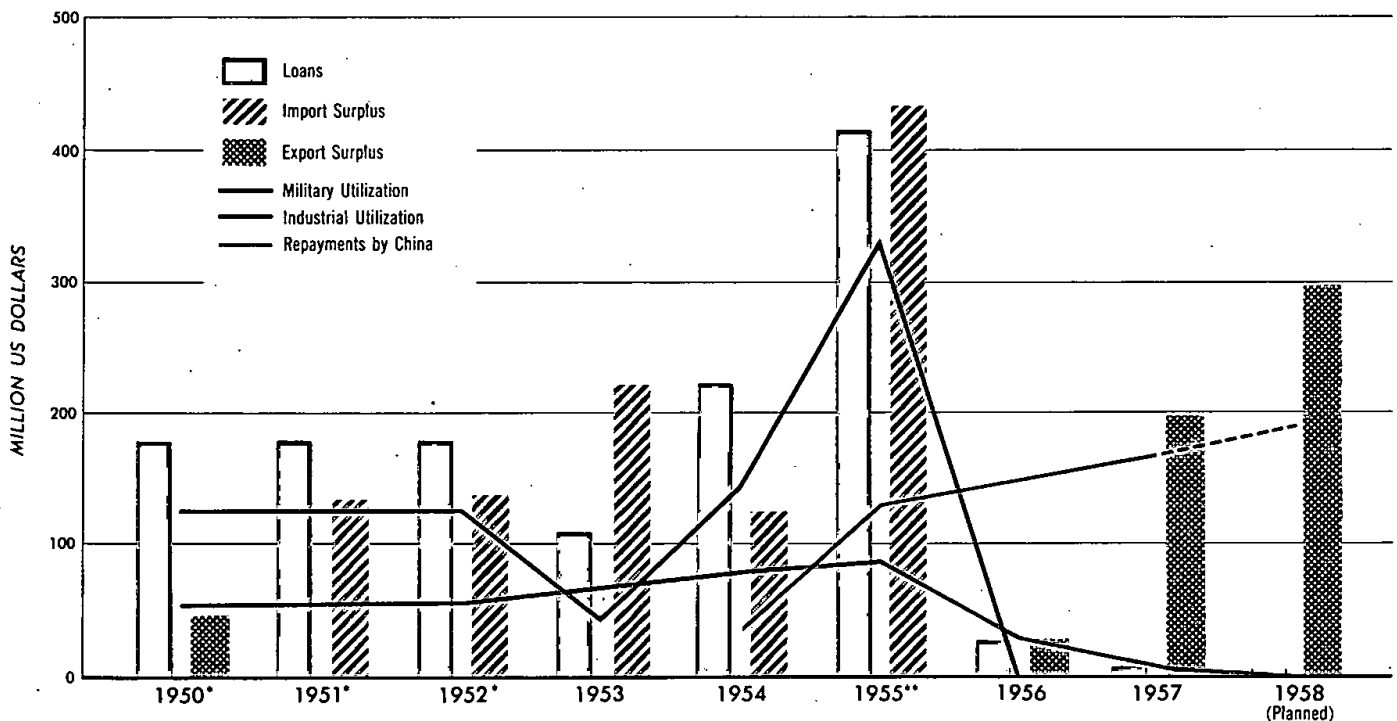
COMMUNIST CHINA BALANCE OF TRADE WITH THE USSR 1950-58*



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USSR: LOANS TO COMMUNIST CHINA UTILIZATION, REPAYMENTS, AND RELATIONSHIP TO THE BALANCE OF TRADE 1950-58



*For the years 1950-52 no information is available on the annual utilization of loans. A simple average is presented above.

**The figure for 1955 includes 75 million dollars estimated to be the value of the joint-stock companies returned to Communist China by the USSR.



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restoration and building of 50 industrial enterprises. 6/ A separate agreement provided for a Soviet loan of \$300 million to China. In 1953 the USSR agreed to assist in the expansion and construction of an un-stated number of electric power stations. 7/ In the same year an agree-ment was signed providing for economic and technical assistance in the construction and renovation of 91 additional enterprises. 8/

Announcement was made in October 1954 of protocols by which the USSR granted an additional credit of \$130 million for economic develop-ment and assistance for the construction of 15 more industrial enter-prises in Communist China. The protocols also provided for the sale of additional equipment for the enterprises valued at \$100 million. 9/ The agreement signed in 1956 provided for 55 additional industrial enter-prises to be constructed with Soviet assistance during the final years of the First Five Year Plan and the early years of the Second Five Year Plan. Equipment for these new projects was valued at \$625 million. 10/

On 8 August 1958, Communist China and the USSR signed an agree-ment providing for Soviet technical aid to China for the building and expansion of "another" 47 major industrial enterprises. 11/ According to the Chinese Communists, these 47 projects are included in the first group of industrial enterprises which the USSR will help China to build during the Second Five Year Plan. It is possible that the 47 plants re-ferred to in the agreement of August 1958 are part of the 211 major projects already covered by the existing Sino-Soviet agreements. A change in the scheduled construction of plants in China may be attrib-uted in part to the "leap forward" acceleration of the industrialization program.

In February 1959 an agreement was announced which calls for 78 additional projects valued at \$1.25 billion to be constructed during the next 9 years. No new loans are involved in this agreement. Although it is possible that some of these projects were included in previous ar-rangements, it is apparent that installations not covered in previous arrangements are involved in this most recent agreement.

Because of the ambiguity of the announcements regarding Sino-Soviet economic agreements, it is not possible to determine precisely the number of Soviet-assisted projects promised to China. Any estimate of the number of projects may be misleading, moreover, for projects vary considerably in size, value, and scope. A single project may consist of a small reprocessing plant, or it may consist of a large steel plant as well as a number of associated steel processing installations.

A more meaningful measure of the scope of Soviet assistance for the industrialization of Communist China is the value of complete plants, equipment, and technical assistance that have been promised or have been

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delivered. Before the most recent agreement in February 1959, the USSR had agreed to provide complete plants and technical assistance valued at about \$2 billion for constructing projects in China. The agreement of February 1959 called for additional equipment and technical assistance amounting to about \$1.3 billion. Thus since 1950 the USSR has committed itself to approximately \$3.3 billion in industrial assistance in the form of complete installations, of which it is estimated that at least \$1 billion have already been fulfilled. The remaining commitment of somewhat more than \$2 billion are to be implemented during the 1959-67 period, a large portion of which is to be allocated during the Second Five Year Plan ending in 1962. Additional equipment, not included in the assistance agreements, has been and will continue to be delivered to China within the terms of annually negotiated trade pacts. It is clear, therefore, that the Soviet role in the industrialization plans of China will be substantial under existing agreements for many years. Moreover, additional agreements may be negotiated before China's Second Five Year Plan has been completed, in particular if the leap forward program results in large increases in the export capabilities of Communist China.

The major portion of the cost of Soviet projects is financed by current exports of Communist China, and industrial loans extended by the USSR for use in financing these projects total only \$430 million. The 1950 loan of \$300 million was drawn on by China over a period of 5 years beginning in January 1950. Repayment of this loan began in 1954 and is being made in 10 annual installments of \$30 million, plus interest at the rate of 1 percent per year. ^{12/} The Soviet loan in 1954 of \$130 million was fully utilized by the end of 1957 and alleviated the burden of servicing the loan of 1950 and other loans during the first 3 years of repayment, 1954-56.

A summary of Soviet economic assistance to industrialization in Communist China during 1950-59 is shown in Table 5.*

Soviet assistance for these projects is comprehensive, including selection of factory sites, collection of data for planning purposes, supply of the equipment, supervision of construction at the site, in stallation of machinery, and guidance in the stage of trial produc- tion. ^{13/} Major emphasis of the Soviet aid program in Communist China has been on the reconstruction, expansion, and construction of iron and steel plants, heavy machinery factories, and electric power installa- tions (see Table 6**).

* Table 5 follows on p. 13.

** Table 6 follows on p. 14.

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Table 5

Soviet Economic Assistance to Industrialization in Communist China
by Date of Agreement
1950-59

Date of Agreement	Economic Credits (Million US \$)	Number of Projects	Value of Complete Sets of Equipment ^{a/}	
			Million US \$	Million Rubles
February 1950	300	50	N.A.	N.A.
September 1953	0	91 ^{b/}	1,300 ^{c/}	5,200 ^{c/}
October 1954	130	15	100	400
April 1956	0	55	625	2,500
August 1958	0	47	N.A.	N.A.
February 1959	0	78 ^{d/}	1,250	5,000
Total	<u>430</u>	<u>289</u>	<u>3,275 ^{e/}</u>	<u>13,100</u>

- a. Including technical assistance related to these projects.
b. Agreement signed to deliver equipment for a total of 141 projects.
c. This sum includes the value of equipment and technical assistance for all of the 141 projects.
d. It has been assumed that the February 1959 agreement is an expansion of the August 1958 announcement and therefore includes the 47 projects under that agreement.
e. Converted at the official rate of 4 rubles to US \$1.

The Chinese Communists originally planned to start construction of 145 projects under the First Five Year Plan (1953-57), but no more than 131 were begun by the end of 1957. ^{14/} The Chinese have reported a total of 67 projects in full or partial operation at the end of 1957, of which 61 can be verified (see Table 6*). Thus about 70 percent of the 211 major projects are scheduled to be completed during the Second Five Year Plan (1958-62). The Chinese Communists report that in the first 10 months

* Table 6 follows on p. 14.

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of 1958 the USSR delivered complete sets of equipment for 20 big metal-lurgical, machine building, power, and coal enterprises. By the end of 1958 the Chinese expected about 30 major Soviet-assisted enterprises to begin full operation. 15/

Table 6

Estimated Number of Major Projects in Communist China
Receiving Soviet Assistance, Under Construction or Completed
1950-57

<u>Industry</u>	<u>Number of Projects Under Construction</u>		<u>Number of Projects Completed</u>
	<u>Verified</u>	<u>Probable</u>	
Iron and steel	19	2	16
Machine	26	11	13
Electric power	22	6	10
Coal	11	10	8
Aircraft	1		1
Chemical	8	2	4
Nonferrous	3		3
Paper	1		1
Petroleum	2		
Textile	3		3
Shipbuilding	3		2
Communications	1		
Total	<u>100</u>	<u>31</u>	<u>61</u>

The form adopted by the USSR for aid in the construction of projects during 1958-62 will differ from that of the First Five Year Plan. According to Peiping, the Chinese will survey and design most of the projects and the USSR will supply the principal equipment. As before, however, technicians from the USSR will continue to assist China in all phases of construction. 16/

One of the most important of the key projects being constructed with Soviet assistance is the An-shan Iron and Steel Complex in Northeast

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China.* The Chinese state that two-thirds of the capital construction at An-shan has been designed with Soviet help. Under the original plan the An-shan complex was scheduled to be producing annually 2.5 million tons of pig iron, 3.2 million tons of steel, and about 2.5 million tons of steel products by 1960. According to the Chinese, these goals were almost achieved by the end of 1957. 17/

The USSR has designed and is assisting in the construction of two other iron and steel complexes, one at Wu-han (Hupeh Province) and the other at Pao-t'ou (Inner Mongolia). The Wu-han complex is reported by the Chinese Communists as more than 40 percent completed. Blast furnace No. 1 at Wu-han, completed in September 1958 about 9 months ahead of schedule, is claimed by the Chinese to be "one of the biggest in the world, with a daily capacity of 2,000 to 2,500 tons of pig iron, surpassing the daily capacity [1,500 tons] of the largest blast furnace in Great Britain." 18/ Both of these major projects are planned for completion by 1962. 19/

Nearly 60 percent of the production of iron and steel in Communist China in 1957 was produced in plants built with the assistance of the USSR. 20/ Moreover, Soviet assistance for this industry should facilitate resolution of a number of problems, such as undue concentration of production at An-shan, inadequate development of ore-mining facilities, and the inability to supply an increasing variety of steels required by the advancing technological level of Chinese industry. These problems are being met to a degree by construction of the integrated plants at Pao-t'ou and Wu-han and through the establishment of small and medium-size plants located throughout the country near ore deposits and local centers of consumption.

Communist China has imported a large volume of Soviet equipment for the exploration and development of petroleum resources. This equipment played an important role in the expansion of petroleum production in China from 436,000 tons in 1952 to about 1.5 million tons in 1957. 21/ The completion of the new refinery at Lan-chou, in particular, will represent a significant addition to refinery capacity and also will provide China with its first modern refinery capable of producing fuels for aircraft engines. Although China has increased its capability to provide certain accessory material and equipment from domestic production, it must continue to import most essential types of petroleum equipment.

The USSR designed and constructed the chemical industrial center at Kirin in Northeast China. The center, including a chemical fertilizer factory, a calcium carbide factory, and a dyestuffs factory, was opened

* Actually, components of the An-shan Iron and Steel Complex, such as individual blast furnaces, are reported by the Chinese Communists as separate projects receiving Soviet assistance.

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in October 1957. 22/ China plans to increase investment in the chemical industry during the Second Five Year Plan and to support in particular its agricultural program by expanding its production capabilities for fertilizers. Soviet assistance is expected to be utilized in expanding the capacity of the installations at Kirin and in other localities as well.

The USSR also is making a substantial contribution to the power industry in Communist China. Powerplants built with Soviet aid were reported to account for about 680,00 kilowatts (kw) out of the power-plant capacity in 1957 of approximately 4.4 million kw. 23/ In addition, it is estimated that the USSR has delivered power-generating equipment of about 700,000 kw capacity which is utilized in other plants throughout China. During 1958 the USSR was expected to deliver to China equipment with a power-generating capacity of 400,000 kw, a large portion of which was to be placed in operation by the end of the year. 24/ It is estimated that China had an electric power output in 1957 of 19 billion kilowatt-hours (kwh) -- higher than that of India (10.9 billion kwh) but low compared with those of Japan (78 billion kwh) and the USSR (210 billion kwh). 25/

As a result of Soviet assistance and equipment, Communist China now has a 6.5- to 10-megawatt thermal research reactor and a 25-million electron-volt cyclotron. These facilities are the largest in the Bloc outside the USSR.

During the First Five Year Plan, Communist China depended on the USSR for the bulk of its imports of industrial equipment. According to a Chinese Communist official of the State Planning Commission, the projects constructed with Soviet assistance during 1953-56 in the coal, electric power, iron, steel, copper, aluminum, and lathe-machine manufacturing industries accounted for 30 to 90 percent of newly added productive capabilities of their respective industries. During the Second Five Year Plan, China intends to produce 70 to 80 percent of its own requirements for industrial equipment and thereby to reduce its dependence on such imports. There are indications that this goal is already being achieved. In 1957, for example, the Fu-la-erh-chi Heavy Machine Building Plant revised its annual investment plan and canceled orders for equipment from the Soviet Bloc valued at \$8 million in favor of domestically produced lathes and cranes.

B. Soviet Technical Assistance to Communist China.

Soviet technical assistance has become an integral part of all phases of the industrial development of Communist China with Soviet specialists employed at all levels of and in all branches of the Chinese economy. An acute shortage of trained Chinese personnel has fostered

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dependence on large numbers of Soviet technicians during the past several years. The Sino-Soviet joint-stock companies formed in 1950 and 1951, for example, were organized and operated primarily by Soviet managerial and technical personnel. The industrial projects for which Soviet assistance is being provided have required the services of many Soviet experts. In addition to providing industrial technicians, the USSR also has sent economic advisers to assist in the formulation and administration of the development program of Communist China.

The precise number of Soviet advisers, specialists, and technicians in Communist China is not known. In 1950, China required a greater number of Soviet technicians because of its low level of industrial competence and because of its entrance into the Korean War. The subsequent development of technically trained Chinese has permitted a sharp reduction in the number of Soviet specialists and technicians in China. The Korean truce and the withdrawal of Soviet forces from Port Arthur also permitted the withdrawal of large numbers of Soviet military specialists.

A substantial demand for Soviet technicians probably will continue during the Second Five Year Plan primarily because these experts will be required on Soviet projects that are still under construction or in the planning stage. For example, Soviet petroleum specialists are still engaged in prospecting in various parts of China, and the USSR will continue to provide technical assistance in the field of nuclear energy. In addition, Soviet technicians and advisers will continue to serve in other sectors of the Chinese Communist economy.

The USSR, besides providing technical assistance and on-the-job training in China, has trained about 7,000 Chinese workers, technicians, and factory administrators in the USSR during the First Five Year Plan. 26/ Most of these men were trained for operational work in the factories and other installations being constructed with Soviet assistance. The An-shan Iron and Steel Complex alone sent more than 700 people to the USSR for practical training. 27/

Although less tangible than technical assistance in the form of expert advice and training, Soviet transfers of scientific and technical information have been of considerable importance in implementing the industrialization program of Communist China. Under the Sino-Soviet Scientific and Technical Cooperation Agreement of October 1954, the USSR has provided China with blueprints for the construction of 600 kinds of factories and enterprises, designs for 1,700 sets of machinery and equipment, and substantial information on production processes. 28/ additional agreements were signed in January 1956 -- one for joint development of the power resources, navigation, and irrigation of the Heilungkiang (Amur) River 29/ and another for technical cooperation in civil aviation. 30/

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Knowledge and data obtained in this manner from the USSR have been useful to China even on projects with which the USSR has not been involved.

IV. Consequences of Sino-Soviet Economic Relations.

Communist China appreciates the technical, economic, military, and industrial assistance which the USSR has provided, but the Chinese are not abject in their gratitude. They are aware of the elements of mutual advantage in their relations with the USSR, the ideological and political support which China provides within and outside of the Soviet Bloc, and the assistance in establishing a strong industrial base that China receives in return. They believe that there are gains to both nations in trade between themselves and the USSR. Thus the Chinese do not regard their position as that of a dependent satellite, in terms either of ideology or economics, but believe rather that they possess sufficient independence to influence the course of intra-Bloc relations. To solidify and to strengthen the position of China within the Bloc, it is likely that China will strive for even greater independence by utilizing in its developmental program its own savings and internal resources whenever possible. At the same time, however, China probably will foster intra-Bloc unity by such means as long-term trade agreements and participation in Bloc-wide plans for economic cooperation.

Just as Chinese leaders recognize their position of strength within the Bloc, so also do they perceive their position of influence on the Free World. The experience of China, the only major underdeveloped country in the Communist Bloc, in applying totalitarian methods to the promotion of economic development under conditions similar to those existing in many other countries, is being closely observed in all parts of the world. If China can accomplish a sharp rise in per capita income and show substantial economic progress, the impact of this success will be felt throughout the world. Leaders in underdeveloped countries, in particular, ambitious for material progress and impatient to find short cuts to industrial development, may be sorely tempted to ignore the consequences of totalitarian control and attempt to follow in the footsteps of the Chinese Communists. Moreover, the significance of the role of the USSR in fostering rapid industrialization in China already has attracted the attention of leaders of many underdeveloped countries. Because the success of China's industrialization program will have important consequences on the future growth of the Communist ideology as well as on the foreign policy interests of both China and the USSR, both of these nations undoubtedly will seek to maintain and to better the economic relations that have been developed during the past 9 years.

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APPENDIX A

STATISTICAL TABLES

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Table 7
 Exports from Communist China to the USSR
 as Reported by the USSR a/*
 1950-57

Exports	1950 b/		1951 c/		1952 b/		1953 b/	
	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent
Raw materials of agricultural origin	67	36	86	26	125	30	122	26
Foodstuffs	22	12	23	7	57	14	89	19
Raw materials of animal origin	10	5	17	5	32	8	13	3
Nonferrous and alloy metals	20	11	46	14	73	18	101	21
Textile raw materials	17	9	30	9	39	9	58	12
Textiles	N.A.	N.A.	4	1	15	4	17	3
Miscellaneous d/	52	27	126	38	73	17	75	16
Total	<u>188</u>	<u>100</u>	<u>332</u>	<u>100</u>	<u>414</u>	<u>100</u>	<u>475</u>	<u>100</u>

* Footnotes for Table 7 follow on p. 21.

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Table 7

Exports from Communist China to the USSR
as Reported by the USSR a/
1950-57
(Continued)

Exports	1954 <u>c/</u>		1955		1956		1957	
	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent
Raw materials of agricultural origin	116	20	130	20	139	18	129	18
Foodstuffs	149	26	179	28	201	26	128	17
Raw materials of animal origin	25	4	22	3	26	3	21	3
Nonferrous and alloy metals	107	19	118	18	126	16	142	19
Textile raw materials	56	10	60	9	59	8	49	7
Textiles	37	6	59	9	96	13	136	18
Miscellaneous <u>d/</u>	88	15	76	13	117	16	133	18
Total	<u>578</u>	<u>100</u>	<u>644</u>	<u>100</u>	<u>764</u>	<u>100</u>	<u>738</u>	<u>100</u>

b. 32/c. 33/

d. Miscellaneous includes industrial goods, industrial raw materials, chemicals and rubber, and cultural and consumer goods.

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Table 8

Imports by Communist China from the USSR
as Reported by the USSR a/*
1950-57

Imports	1950 <u>b</u> /		1951 <u>c</u> /		1952 <u>b</u> /		1953 <u>b</u> /	
	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent
Equipment and machines	41	11	108	23	157	28	161	23
Complete installations	(1)	(0.3)	(32)	(7)	(41)	(7)	(49)	(7)
Ferrous metals	20	5	50	10	66	12	68	10
Nonferrous metals	3	1	17	4	16	3	14 <u>d</u> /	2
Petroleum and petroleum products	11	3	39	8	33	6	45	6
Paper	4	1	11	2	17	3	9	1
Miscellaneous <u>e</u> /	23 <u>d</u> /	6	51	11	19 <u>d</u> /	4	10	2
Unaccounted for <u>f</u> /	286	73	200	42	246	44	391	56
Total	388	100	476	100	554	100	698	100

* Footnotes for Table 8 follow on p. 23.

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Table 8

Imports by Communist China from the USSR
as Reported by the USSR a/
1950-57
(Continued)

Imports	1954 c/		1955		1956		1957	
	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent	Million US \$	Percent
Equipment and machines	199	26	230	31	305	42	272	50
Complete installations	(93)	(12)	(142)	(19)	(217)	(30)	(209)	(38)
Ferrous metals	88	12	76	10	61	8	33	6
Nonferrous metals	22	3	13	2	18	2	8	1
Petroleum and petroleum products	45	6	79 d/	11	86	12	90	17
Paper	6	1	7	1	6	1	3	1
Miscellaneous e/	25	3	16	2	15	2	15	3
Unaccounted for f/	374	49	327	43	242	33	123	22
Total	<u>759</u>	<u>100</u>	<u>748</u>	<u>100</u>	<u>733</u>	<u>100</u>	<u>544</u>	<u>100</u>

b. 35/
c. 36/
d. 37/

e. Including such categories as chemicals, building materials, pharmaceuticals, and cultural and consumer goods.
f. Representing the value of goods not listed [redacted] and believed to be primarily of military and strategic origin.

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APPENDIX B

METHODOLOGY: DOLLAR VALUE OF THE FOREIGN TRADE
OF COMMUNIST CHINA, 1950-58

The estimated dollar value of the foreign trade of Communist China for the years 1950-58 (see Table 1*) is significantly different from that derived by the previous method whereby the yuan values of trade (as reported by China) were converted into dollars on the basis of the dollar crossrate to the yuan-sterling exchange rate officially reported by China.

Since 1957, new Soviet figures for trade with Communist China (see Table 9**) as well as some additional statistics on trade with the European Satellites have been released. The new information suggests that China is using a dual exchange rate system which results in a lower value of the yuan in trade with the Bloc than in trade with the West. This procedure may possibly be attributed to such factors as the relationship between internal and external prices and the commodity mix of trade with particular areas.

For the years 1951 through 1958 the new Soviet figures, when compared with appropriate data [redacted], reveal an approximately constant ratio of about 4 yuan, as valued in Sino-Soviet trade, to the dollar equivalent of the ruble values. Thus the yuan appears to be valued at par with the ruble in Sino-Soviet trade.

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Variations from equality between the ruble and the yuan (there are substantial variances only for the years 1950 and 1955) appear to represent differences in Chinese Communist and Soviet reporting techniques. It appears, for example, that in 1950 the USSR included military equipment which China excluded and that in 1955 the Chinese included but the USSR excluded the transfer of joint-stock company assets and military equipment and bases within China from Soviet to Chinese ownership.

* P. 5, above.

** Table 9 follows on p. 26.

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Table 9

Value of Imports, Exports, and Trade Balances of Communist China
with the USSR as Reported by the USSR a/
1950-58

Million US \$				
<u>Year</u>	<u>Total Trade b/</u>	<u>Exports</u>	<u>Imports</u>	<u>Trade Balance</u>
1950	576	188	388	-200
1951 c/	808	332	476	-144
1952	968	414	554	-140
1953	1,172	475	698	-223
1954 c/	1,338	578	759	-181
1955 c/	1,392	644	748	-104
1956	1,497	764	733	31
1957 d/	1,282	738	544	194
1958 e/ (pro- visional)	1,517	908	609	299
Total	<u>10,550</u>	<u>5,041</u>	<u>5,509</u>	<u>-468</u>

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b. Total trade figures are derived from unrounded data.

- c. 39/
- d. 40/
- e. 41/

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