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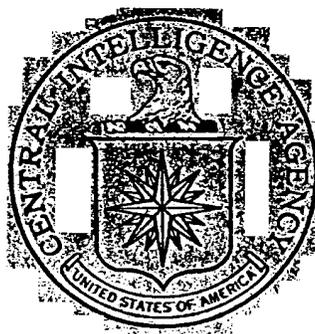
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~~ECONOMIC INTELLIGENCE REPORT~~

~~COMPARISON OF THE FIRST FIVE YEAR PLANS
OF COMMUNIST CHINA AND THE USSR~~

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ECONOMIC INTELLIGENCE REPORT

COMPARISON OF THE FIRST FIVE YEAR PLANS
OF COMMUNIST CHINA AND THE USSR

CIA/RR 59-20

CENTRAL INTELLIGENCE AGENCY
Office of Research and Reports

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COMPARISON OF THE FIRST FIVE YEAR PLANS
OF COMMUNIST CHINA AND THE USSR*

Summary and Conclusions

In 1952, Communist China embarked on a 5-year economic plan in more or less open imitation of the Five Year Plans of the USSR. In its political structure and ideology, Communist China was a carbon copy of the USSR. The broad objective of the Chinese First Five Year Plan (1953-57), as well as of succeeding plans, was identical with that of the Soviet First Five Year Plan (1928-32) -- namely, rapid industrialization with special emphasis on heavy industry. These broad similarities invite a comparison of the performance under the First Five Year Plans of the two countries.

Over-all output in China in the period 1952-57 grew at an average annual rate of about 7 percent -- as fast as, or possibly even faster than, output in the USSR in 1928-32. The growth of China's output was, however, much better balanced, for the reason that not only heavy industry but also light industry and agriculture expanded, whereas in the USSR agriculture declined seriously and light industry failed to expand. The Chinese economy accomplished this growth in output, which was comparable to growth in the Soviet First Five Year Plan, with a relatively smaller input of investment and with a great deal less disruption and suffering on the part of the population. The general standard of living even of urban workers declined in the USSR during this period, but in China the standard of living of both the agricultural and nonagricultural population rose. On the whole, the Chinese performance under the First Five Year Plan was considerably smoother and more successful than that of the USSR.

This apparently superior performance by the Chinese was due in part to the nature of the problem confronting them at the outset of their First Five Year Plan. To an important degree, the immediate task was one of effective recovery and restoration after long years of disruption due to civil war and involved reconstruction of damaged productive facilities already in existence. The Soviet economy in 1928, on the contrary, had already fully recovered from war and civil war in the preceding period of the "new economic plan" (NEP).

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 February 1959.

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The second and perhaps even more important explanation of the Chinese success was their advantage of being able to learn from the experience of the USSR and thereby to avoid some of the grosser Soviet mistakes. The assistance of a large number of Soviet advisers in all aspects of economic activity was a key factor in this effort. The very fact that the Chinese were able to initiate a Five Year Plan in 1953 and draw up a comprehensive Plan in 1955, only 5 years after acquiring full political control over China, was possible because the USSR had painfully pioneered the concept and the machinery of central planning and direction of a socialist economy. The Chinese were able to adopt the administrative structure of the industrial ministries, which was not fully developed in the USSR until the Second Five Year Plan (1933-37). Fiscal and monetary policies were likewise borrowed in large part from the USSR, with such success that the Chinese had relatively insignificant price inflation during the period. The USSR suffered very rapid and disruptive inflation both during the First and during the Second Five Year Plan.

The most important lesson learned, however, was from the catastrophic socialization of Soviet agriculture. Taking care to prevent a fall in peasant income, the Chinese were able to socialize agriculture almost painlessly and with only minor disruptions. Relying on the organization of joint state-private enterprises, the Chinese Communists proceeded to bring nearly all industry and trade under state control very rapidly while permitting greater use of the "capitalist" class in the process. The pace of socialization proceeded so rapidly that it more than made up for the much larger degree of state control over industry and commerce that already existed in the USSR before the Soviet First Five Year Plan began.

Not only Chinese economic administrative machinery but also specific economic policies were a close imitation of recent Soviet practice. Trade policy, like that of the USSR, was to export raw materials in exchange for capital goods not available domestically but otherwise to avoid dependence on foreign sources of supply. The pattern of investment allocation, like that of the USSR, was to give outstanding priority to heavy industry. The Chinese initially set out to borrow Soviet industrial technology almost without modification. Given the close political and ideological ties between the two countries and the substantial Soviet economic and technological aid, this initial limitation was to be expected and contributed substantially to the successful launching by the Chinese of a centrally planned socialist economy.

An additional factor of some significance was that imports of machinery and equipment and foreign credit, especially from the USSR, were considerably larger relative to total investment in China than

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in the USSR. Although Soviet credits as a percentage of Chinese imports were not as high as the percentage of Soviet imports supported by credits, the foreign trade of Communist China was more important to its economy, and with its initial level of production of investment goods China relied more heavily on imports, particularly guaranteed deliveries from the USSR, to carry out its investment program.

There were, however, certain differences in economic policies due to differences in economic resources in the two countries and also due to efforts aimed at avoiding pitfalls encountered by the USSR during its First Five Year Plan. The USSR followed a pattern of agricultural investment designed to raise the productivity of the farm population through mechanization of agriculture and to encourage wholesale migration of labor out of agriculture throughout the first three Five Year Plans. Not until 1953 did the Soviet planners give a high priority to increasing agricultural production. During the Soviet First Five Year Plan the migration of the rural population to the cities was more rapid than the ability of industry to absorb and train the additional workers.

The Chinese Communists already had much larger manpower resources in both the agricultural and the nonagricultural population. With an ample labor force for the mechanization of industry, release of labor has not been a feature of agricultural investment as it was in the USSR. Instead, the Chinese have directed investment into irrigation, water conservation, and, most recently, fertilizer production with the primary objective of raising output through more traditional labor-intensive measures. The Chinese also kept the increase in the labor force in industry and other nonagricultural sectors to a minimum. This factor, together with large-scale investment, permitted substantial increases in productivity. The low standard of living, especially of diet, and the rapid increase in the Chinese population led the Chinese to give concentrated attention to the problem of raising agricultural output, and the Chinese have allocated increasing priority to this purpose, a priority not given by the USSR until its Fifth Five Year Plan (1951-55).

In addition to the divergence in agriculture, where the differences in resources between the two countries are substantial, by the end of the First Five Year Plan the Chinese showed other signs of independent initiative and originality. A second policy innovation, which appeared first in 1957, was an increasing emphasis on small-scale plants, representing a dramatic departure from the Soviet practice of building large-scale, capital-intensive, labor-saving plants. Small-scale plants are entirely appropriate, however, for China's cheap-labor resources and scarcity of capital. Communist China has

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also adopted the latest administrative development of the USSR -- decentralization. The Chinese seem, however, to be carrying it much further, in fact, than the USSR has done, transferring large parts of industries to local control.

The third policy innovation, which appeared in 1958, is the introduction of communes combining agricultural, local handicraft, and supply and marketing functions into one comprehensive economic organization at the township level. The political and economic ramifications of this new form of organization cannot be evaluated at this time.

This tendency of the Chinese to develop original approaches and policies of their own along with adopting and modifying the latest Soviet innovations makes forecasting Chinese future developments on the basis of Soviet developments of two or three decades ago a hazardous and uncertain business.

Growth in the total output during the Soviet Second Five Year Plan was much more rapid than during the First Five Year Plan. Some of the factors which brought this about, however, do not apply to China's Second Five Year Plan. Soviet agriculture rebounded from the drastic declines in output during the First Five Year Plan and by 1937 was well above 1928. The increase in agricultural raw materials permitted a rapid increase in light industry. In heavy industry the large investment for expansion during the First Five Year Plan came into full production during the Second. The large numbers of inexperienced workers added during the First Five Year Plan had by the Second become reasonably well trained and efficient. These factors combined to produce a much more rapid growth in Soviet heavy industry during the Second Five Year Plan than during the preceding 5 years. In contrast, China's performance under the First Five Year Plan and Chinese plans (as outlined in 1956 and 1957) for the Second would indicate for the latter a rate of increase for agriculture only slightly higher than in the preceding period and a growth for industry no higher and probably somewhat lower than during the First Five Year Plan.

On the other hand, new developments in China, without precedent in either China or the USSR, have completely outdated the rate of economic development set in the proposals for the Second Five Year Plan. The "leap forward" movement, operating through the new commune system or organization, is aimed at mobilizing the vast rural Chinese labor force for an impressive program of investment in agriculture and small-scale, local industry. Because these innovations are well calculated to take advantage of China's abundant manpower

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and because natural resources for both industrial and agricultural development are adequate, China's rate of economic growth during the Second Five Year Plan may very well equal or exceed the growth of the USSR during its Second Five Year Plan.

The most important question appears to be social and political rather than economic -- whether the organization of the population into communes will succeed. In any event, Communist China will present a strong contrast to the long-term experience of the USSR, where industry was developed at the expense of, and in spite of failures in, Soviet agriculture.

I. Introduction.

The initiation of the Chinese First Five Year Plan in 1952 had the appearance of a restaging of a drama that had been first acted out by the Soviet Communists over the period 1928-32. Both governments were Communist Party dictatorships with virtually identical ideology. Each had the broad objective of maximizing the power of the state. As in the USSR, the Chinese proceeded to socialize the entire economy quickly and adopted the goal of rapid industrialization with highest priority to heavy industry. The Chinese borrowed wholesale from the Soviet administrative organization and techniques of planning.

Along with the similarities, there were also radical differences between the two countries, primarily in resource endowment and starting point or stage of development. The purpose of this report is to compare the results under the First Five Year Plans in the two countries to see whether the interpretation of these results in light of both the similarities and the differences between the countries sheds any light on China's prospects for the future.

Problems of methodology in a comparison of this kind are many. International comparison at best is difficult, but an international comparison of two countries during different time periods presents an even more difficult problem. The problem is further complicated by paucity of data available to support such a comparison. Only recently have official data been available on many sectors of the Chinese economy and, particularly in the early years of the Chinese Communist First Five Year Plan, the coverage and reliability of Communist statistics, even when available, are inadequate. Official

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statistics are more complete for the First Five Year Plan of the USSR, but drastic price changes occurred and many of the official statistics are confusing and in some areas clearly inconsistent with other Soviet data.

In view of these limitations, this report attempts to concentrate on the types of conclusions that will hold in spite of wide margins of error in the data being used. When figures are given, they are interpreted in ways that do not require a high degree of accuracy to support the conclusions reached.

II. Situation at the Beginning of the First Five Year Plans of Communist China and the USSR.

A. Historical Background.

The economic situations that existed in the USSR and in Communist China before the period of each First Five Year Plan must be compared in order to understand the economic trends that took place. The period of Russian participation in World War I and the revolutionary period that followed lasted for 8 years and was followed by a 7-year period of gradual recovery before the Soviet First Five Year Plan was initiated. During this latter period, marked by the "new economic policy" (NEP), socialization had proceeded to a point at which, by 1928, 80 percent of industry was socialized and nearly 80 percent of all retail sales, including the public catering system, were made by state and cooperative trade. Only the agricultural sector remained to be socialized. At the beginning of the Soviet First Five Year Plan, therefore, the process of recovery of output after a period of war and civil war had already reached its completion and socialization of industry and trade was well advanced.

The Chinese Communists gained control over the Chinese mainland in 1949 after the Sino-Japanese war, World War II, and the ensuing civil war -- a period that lasted for about 8 years in Manchuria and about 12 years in the rest of China. In contrast to the situation in the USSR, the First Five Year Plan was initiated only 3 years after the Communists had taken power. The process of recovery, therefore, had not ended, and it was not until 1955 -- the midpoint of the Chinese First Five Year Plan -- that socialization reached a point equivalent to that of the Soviet economy in 1928.

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B. Structure of the Two Economies at the Beginning of Their Respective Five Year Plans.

At the beginning of its First Five Year Plan in 1928 the USSR had already attained a level of industrialization that was not to be achieved by Communist China until 1957 or later (see Table 1*). The contribution to total output of industry and construction in 1928 for the USSR is estimated to have been about 27 percent compared with the 16 percent estimated for Communist China in 1952. At the same time, Soviet agriculture in 1928 represented a smaller share of total output than did the agricultural sector of the Chinese economy in 1952. Even allowing for significant differences in relative prices of transportation and communications and a higher degree of state control over native transportation, it is clear the USSR had a much more developed transportation system in 1928 than did China at any time during its First Five Year Plan.

C. Levels of Output.

1. Consumer Goods and Services.

Soviet per capita consumption in 1928 was much higher than China's per capita consumption in 1952, as indicated by the sample of consumer goods in Table 2.** An average of the consumer goods production estimates presented in Table 2, weighted by Chinese prices, indicates that Soviet output of consumer goods in 1928 was probably more than 60 percent of China's production. As the Soviet population in 1928 was only 26 percent of China's in 1952, Soviet per capita consumption of the sample consumer goods in 1928 was more than twice that of China in 1952.

Urban housing space in Communist China in 1952 was about 4.1 square meters per capita. 1/*** Soviet urban housing in 1928 was about 6.9 square meters per capita, 2/ or about 1.7 times higher than in China in 1952. This ratio is probably also representative of differences in rural per capita housing. Reflecting the differences in the number of employees in communal services (see Table 5****) and the population differences, per capita consumption of communal services in the USSR was probably more than two times that of China.

The much higher level of per capita consumption in the USSR at the beginning of its First Five Year Plan permitted a higher level of savings and provided a safety margin for mistakes.†

* Table 1 follows on p. 8.

** Table 2 follows on p. 9.

*** For serially numbered source references, see the Appendix.

**** P. 15, below.

† Text continued on p. 10.

Table 1
Gross National Product, by Sector of Origin, of Communist China, 1952 and 1957,
and of the USSR, 1928

Sector of Origin	Communist China ^{a/}		USSR ^{b/}			
	1952	1957	1928			
	Billion Yuan at 1956 Prices	Percent	Billion Yuan at 1956 Prices	Percent	Billion Rubles at 1928 Prices	Percent
Agriculture, forestry, and fishing	42.73	58.4	48.30	47.8	12.55	42.0
Industry and construction	11.34	15.5	24.35	24.1	7.98	26.7
Modern transportation and communications	1.85	2.6	4.44	4.4	2.57	8.6
Trade, native transportation, and miscellaneous business services	7.33	10.0	11.54	11.4	1.98	6.6
Government	4.18	5.7	4.40	4.3	2.38	7.9
Consumer services and house rent	5.72	7.8	8.12	8.0	2.44	8.2
Total GNP at factor cost	<u>73.15</u>	<u>100.0</u>	<u>101.15</u>	<u>100.0</u>	<u>29.90</u>	<u>100.0</u>
Indirect taxes	4.34		8.15		2.67	
Total GNP at market prices	<u>77.49</u>		<u>109.30</u>		<u>32.57</u>	

a. Estimates based on sector distribution of output in 1956. Sources used are budget data and labor force and wage data given for the most part in source 3/. Production figures with value-added weights are then used to obtain the estimates given for 1952 and 1957 in 1956 prices. Rental income has been revised to reflect data on urban housing in the period.

b. Estimates based on Hoefding's estimate of net national product for 1928. ^{4/} Depreciation by sector given in source used by Hoefding is added. ^{5/}

Table 2
First Five Year Plans, Communist China and the USSR:
Production of Selected Consumer Goods

Consumer Goods	Unit	Communist China			USSR		
		1952	1957	Percent of Annual Increase	1927-28	1932	Percent of Annual Change
Grain	Million metric tons g/ Per capita (kilograms) f/	149 b/ 259	163 c/ 260	2	84.9 d/ 560.8	80.7 g/ 510.4	-1
Meat	Million metric tons h/ Per capita (kilograms)	6.369 b/ 11.1	8.487 b/ 13.4	6	3.94 e/ 26	2.24 f/ 14	-14
Vegetable oil	Thousand metric tons i/ Per capita (kilograms)	983 k/ 1.71	1,450 l/ 2.29	8	448 m/ 2.99	490 n/ 3.10	2
Sugar	Thousand metric tons r/ Per capita (kilograms)	451 o/ 0.8	865 p/ 1.4	14	1,283 q/ 8.6	828 r/ 5.2	-8
Cotton cloth	Million meters Per capita (meters)	3,822 z/ 6.6	5,050 z/ 8.0	6	2,678 w/ 17.9	2,694 w/ 17.0	
Rubber shoes	Million pairs Per capita (pair)	61.7 o/ 0.11	136.0 p/ 0.22	17	36.3 u/ 0.24	64.7 v/ 0.41	15
Paper, machine-made	Thousand metric tons Per capita (kilograms)	372 g/ 0.65	905 p/ 1.43	19	284 m/ 1.89	471 n/ 2.96	13

- a. Chinese tonnage includes rice, wheat, potatoes, other grains, and legumes (excluding soybeans). Soviet tonnage includes rice, wheat, winter rye, barley, oats, corn, sorghum, millet, buckwheat, and legumes (excluding soybeans). Potatoes are added at a ratio of 1 to 4. Rice is converted to its hulled form at a ratio of 0.75 to 1.
- b. The official figure for 1952 has been adjusted upward to compensate for the statistical understatement of acreage and production estimated to have occurred in this year and other years from 1950 to 1953.
- c. g/
- d. f/
- e. 1928 only.
- f. Based on the following populations: for China, 1 July 1952, 576 million g/ -- and for the USSR, 1927-28, 150.0 million; 1 July 1928, 151.4 million; and 1 July 1932, 156.1 million. g/
- g. Including beef, veal, pork, and mutton (carcass weights including animal fats); excluding poultry and rabbits.
- h. Estimated from factors for slaughter rates and carcass weight of various types of animals, with reported animal numbers.
- i. 10/
- j. Total Soviet industrial production of vegetable oil (excluding minor amounts produced on collective farms). China's output excludes 'farm home' production.
- k. 11/
- l. 12/
- m. 13/
- n. Soviet granulated sugar (equivalent to US raw sugar).
- o. 14/
- p. 15/

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A decline in Chinese per capita consumption comparable to the serious decline in Soviet per capita consumption in 1931 and 1932 would have had serious social and political repercussions. Even if per capita consumption could continue to increase at the relatively favorable rates achieved during the First Five Year Plan, it would take 20 years for Communist China to achieve a consumption level comparable to that of the USSR in 1928.

2. Industrial Base.

The USSR in 1928 had a much higher industrial base in relation to its population than China in 1952 (see Table 3*). The fuel output for the USSR in terms of standard fuel equivalents was 51.5 million standard units in 1928 compared with 60.2 million for China in 1952. Soviet energy output per capita was therefore 3.3 times that of China at the beginning of their respective Five Year Plans. The Soviet steel output was more than 3 times that of China in 1952, and Soviet per capita output of steel was 12 times that of China. These relationships for steel output probably hold in general for the relative outputs of the machine industries.

The total volume of freight turnover in ton-kilometers in the USSR was 1.7 times, and per capita freight turnover was 6.4 times, that of China. Passenger traffic for the USSR was 1.1 times, and per capita traffic was 4.2 times, that of China.

D. Occupational Distribution of the Labor Force and Productivity.

The agricultural population as a percentage of total population in Communist China in 1952 was about 81 percent, only slightly higher than the percentage of 79 percent in the USSR in 1928 (see Table 4**). The nonagricultural population, however, in China was not concentrated to the same extent in the relatively organized economic sectors. In 1952, only 3.4 percent of the total Chinese population was supported by employees in industry (excluding individual handicraft), construction, transportation, and communications; but 7.4 percent of the total Soviet population in 1928 had been supported by employees in these sectors, which are directly associated with the program of rapid industrialization.

The higher per capita consumption and per capita investment of the Soviet population in 1928 have their counterparts in higher***

* Table 3 follows on p. 11.

** Table 4 follows on p. 13.

*** Text continued on p. 14.

Table 3

First Five Year Plans, Communist China and the USSR:
Production of Selected Producer Goods and Performance in Transportation

Producer Goods	Unit	Communist China		USSR	
		1952	1957	1927-28	1932
Electricity	Billion kilowatt-hours Per capita (kilowatt-hours) <u>g/</u>	7.26 <u>g/</u>	19.34 <u>b/</u>	5.01 <u>c/ d/</u>	13.54 <u>d/</u>
		12.6	30.6	33.1	85.6
Hydroelectric	Billion kilowatt-hours	0.9 <u>f/</u>	4.4 <u>g/</u>	0.4 <u>c/ b/</u>	0.8
Coal	Million metric tons Per capita (kilograms)	63.53 <u>a/</u>	124.18 <u>h/</u>	35.51 <u>j/</u>	64.36 <u>j/</u>
		110	196	237	407
Crude oil	Million metric tons Per capita (kilograms)	0.436 <u>a/</u>	1.455 <u>k/</u>	11.472 <u>j/</u>	21.413 <u>j/</u>
		0.76	2.30	76.4	135.4
Crude steel	Million metric tons Per capita (kilograms)	1.350 <u>a/</u>	5.235 <u>l/</u>	4.251 <u>j/</u>	5.927 <u>j/</u>
		2.34	8.28	28.34	37.49
Cement	Million metric tons Per capita (kilograms)	2.860 <u>a/</u>	6.690 <u>l/</u>	1.850 <u>j/</u>	3.481 <u>j/</u>
		4.97	10.6	12.3	22.0
Hauled lumber	Million cubic meters Per capita (cubic centimeters)	10.02 <u>a/</u>	26.58 <u>l/</u>	36.0 <u>c/ m/</u>	99.4 <u>m/</u>
		1.7	4.2	23.8	62.9
Sulfuric acid	Thousand metric tons Per capita (kilograms)	190 <u>g/</u>	611 <u>g/</u>	210.6 <u>g/</u>	552.1 <u>g/</u>
		0.33	0.97	1.40	3.49
Machine tools	Thousand units	13.7 <u>g/</u>	28.0 <u>f/</u>	2.0 <u>m/</u>	19.7 <u>m/</u>
Railroad freight	Billion ton-kilometers Per capita (ton-kilometers)	60.2 <u>p/</u>	134.6 <u>g/</u>	88.2 <u>r/</u>	169.3 <u>g/</u>
		104.5	213.0	588.0	1,070.8

* Footnotes for Table 3 follow on p. 12.

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Table 3
 First Five Year Plans, Communist China and the USSR:
 Production of Selected Producer Goods and Performance in Transportation
 (Continued)

Producer Goods	Unit	Communist China		USSR			
		1952	1957	1927-28	1932	Percent of Annual Increase	
Inland (excluding junks)	Billion ton-kilometers	3.64 <u>p/</u>	15.1 <u>t/</u>	33	15.9 <u>g/</u> <u>w/</u>	26.1 <u>g/</u>	13
	Per capita (ton-kilometers)	6.32	23.9	105.0	165.1		
Ocean	Billion ton-kilometers	5.0 <u>p/</u>	10.7 <u>t/</u>	16	9.1 <u>g/</u> <u>w/</u>	18.2 <u>g/</u>	19
	Per capita (ton-kilometers)	8.7	16.9	60.1	115.1		
Highway freight	Billion ton-kilometers	0.678 <u>p/</u>	3.79 <u>t/</u>	41	0.147 <u>g/</u> <u>w/</u>	1.07 <u>g/</u>	64
	Per capita (ton-kilometers)	1.177	5.997	0.971	6.768		

a. 16/
 b. 17/
 c. 1928 only.
 d. 18/
 e. Based on the following populations: for China, 1 July 1952, 576 million, and 1 July 1957, 632 million 19/ -- and for the USSR, 1927-28, 150.0 million; 1 July 1928, 151.4 million; and 1 July 1932, 158.1 million. 20/
 f. 21/ j. 25/ n. 29/ r. 33/
 g. 22/ k. 26/ o. 30/ s. 34/
 h. 23/ l. 27/ p. 31/ t. 35/
 i. 24/ m. 28/ q. 32/ u. 36/

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Table 4

First Five Year Plans, Communist China and the USSR:
Population and Nonagricultural Labor Force a/

Million Persons

	Communist China				USSR					
	1952	1957	1928	1932	1952	1957	1928	1932		
Total agricultural	467.0	500.0	79.1	81.1	119.520	114.510	78.9	72.4	27.4	21.383
Private	466.5	481.6	76.2	81.0	113.970	114.510	75.3	27.4	27.4	21.383
Kolkhoz	0.5			0.1	2.600	4.333	1.7	41.9	41.9	2.8
State	Negligible			Negligible	2.950	4.877	1.9	3.1	3.1	2.166
Total nonagricultural	109	132	20.9	18.9	31.869	43.621	21.1	27.6	27.6	21.383
Including:										
Workers and staff	45.4	72	11.4	7.9	18.876	39.242	12.5	24.8	19.217	19.217
Other	63.6	60	9.5	11.0	12.993	4.379	8.6	2.8	2.166	2.166
Total population	576	632	100.0	100.0	151.389	158.131	100.0	100.0	100.0	100.0

a. May year figures.

productivity. Farm per capita production in the USSR in 1928 (see Tables 2* and 4**) was as follows: grain, 710 kilograms (kg); meat, 33.0 kg; and cotton, 6.9 kg. The comparable figures for China in 1952 are as follows: grain, 319 kg; meat, 13.6 kg; and cotton, 2.8 kg. Per capita output of the Soviet farm population in 1928 was therefore from 2.2 to 2.5 times that of the Chinese farm population in 1952.

Productivity of Soviet workers in the sectors associated with industrial development was, however, not a great deal higher than for Chinese workers (see Table 5***). Counting 1 passenger-kilometer as equivalent to 1 ton-kilometer, unit-kilometer output per employee in transportation and communications was 93,786 units for the USSR in 1928 compared with 82,854 units for China. Employees in the transportation system in the USSR were therefore approximately 1.1 times as productive as those in China in 1952. The total energy production per employee in industry, in construction, and in transportation and communications in the USSR in 1928 was 10.1 tons of standard fuel. This is 1.2 times the comparable figure for China in 1952 of 8.1 tons. If individual handicraft workers are included, the amount of energy per worker in the USSR was 1.7 times that in China at the beginning of their respective First Five Year Plans. Steel output per employee in industry and construction was 1,143 kg for the USSR and 214 kg for China, a margin of 5.3 to 1 for the USSR.

III. Trends in Production During the Two Five Year Plans.

During its First Five Year Plan, total gross national production of Communist China as estimated by sector origin in 1956 prices (see Table 1****) increased at an average annual rate of approximately 7 percent. An estimate by end use gives an average rate closer to 8 percent annually. The rate of growth for the Chinese Second Five Year Plan is projected at approximately the same general rate of growth as for the First Five Year Plan. Jasny estimates that Soviet net national product in 1926-27 constant prices increased from 1928 through 1937 at an average annual rate of 8.8 percent when estimated by sector origin and 8.0 percent when estimated by end use. 37/ No estimate of the rate of growth for total Soviet output from 1927 through 1932 is available. It was almost certainly lower than the average rate of growth from 1932 to 1937, but, even allowing for this, it is probable that the rate of increase for the Soviet First Five Year Plan was no greater and perhaps somewhat less than that for Communist China during its First Five Year Plan.

* P. 9, above.

** P. 13, above.

*** Table 5 follows on p. 15.

**** P. 8, above.

Table 5
First Five Year Plans, Communist China and the USSR:
Wage and Salary Earners

	Communist China ^{a/}			USSR ^{b/}			Thousand Persons
	1952	Percent	1956 ^{c/}	Percent	1928	1932	
Total wage and salary earners	15,800		24,190		10,252	22,075	
Agriculture, forestry, and water conservancy	239		610		2,007	3,998	
Nonagricultural sector	15,561	100	23,580	100	8,245	18,077	100
Industry	5,260	34	7,170	30	2,996	6,302	36
Construction	1,050	7	2,950	13	723	3,126	9
Transportation and communications	1,130	7	1,560	7	1,365	2,446	17
Banking	305	2	377	2	95	128	1
Social, cultural, educational, and health	2,282	15	3,120	13	1,352	2,262	16
State administration	1,523	10	1,600	7	1,010	1,650	12
Commerce ^{d/}	3,970	25	6,707	28	587	1,926	7
Public utilities	41	Negligible	96	Negligible	117	237	2
Individual handicraft	4,550 ^{e/}		5,780 ^{e/}		1,000 ^{f/}	1,700 ^{f/}	

a. Year-end date. The figure for total wage and salary earners is based on source 38/; agricultural, forestry, and water conservancy, on 39/; nonagricultural sector, on 40/; and individual handicraft, on 41/.

b. Annual averages. The classification used is that found in Socialist Construction in the USSR, 42/ because it is believed to be closer to that used for Communist China. The only change is that the state administration figures given 43/ are believed to be more comparable to the Chinese figures, and the residual is estimated to be cultural workers -- a figure which is added to the figures for workers in education and health. The figures for industry in 1932 exclude 179,000 workers in cooperatives, 44/ which have been subtracted, and an estimated 100,000 cooperative workers have been excluded from the number of industrial workers in 1928.

c. It is believed that total wage and salary earners in 1957 were approximately equal to the 1956 total.

d. Chinese residual, perhaps including some native transportation workers.

e. Individual handicraft number for China based on figures for 1956 and increases in productivity. 45/

f. 46/

Although the over-all rates of growth for the two economies are comparable for their First Five Year Plans, the Chinese First Five Year Plan progressed more smoothly and involved more efficient use of resources. This plan had many difficulties and some outright failures; but the Soviet plan was characterized by social and political dislocations of such magnitude that they seriously interfered with economic trends, whereas the changes introduced in China were not nearly so disastrous in terms of production.

A. Agriculture.

Trends in the gross value of agricultural production, exclusive of forestry, fishing, hunting, and subsidiary handicrafts, for Communist China and the USSR are given in the following tabulation:

	Communist China					
	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>
Index <u>47/</u>	100	101	99	105	110	114

	USSR					
	<u>1928</u>	<u>1929</u>	<u>1930</u>	<u>1931</u>	<u>1932</u>	<u>1933</u>
Index <u>48/</u>	100	102	98	87	80	85

Agricultural output in China, excluding forestry, fishing, and hunting, increased by about 14 percent in the 5 years from 1952 to 1957, whereas there was a decline of 15 percent in the USSR in the 5 years following 1928, and output was 20 percent less in 1932 than in 1928.

B. Industry.

For Communist China, industrial output is estimated to have increased at an average annual rate of nearly 16 percent during the First Five Year Plan period. This estimate, of course, is necessarily preliminary because research on trends in Chinese industry has just begun. The exact trends in industrial output during the Soviet Five Year Plan are still the subject of some dispute. Jasny gives an index for all industry in constant 1926-27 rubles which shows an average annual increase of 13 percent, 49/ substantially higher than an index of all industrial output as estimated by Nutter -- giving an average

annual increase in 1928 rubles of about 9 percent. ^{50/} Hodgman's index of Soviet large-scale industrial output, using 1934 payroll weights, gives an average annual increase during the Soviet First Five Year Plan of 13.6 percent. ^{51/} This increase can be compared with the present estimate of a rate of increase for China's industry, excluding output of individual handicrafts, of nearly 19 percent. Seton ^{52/} approaches the problem of estimating trends in industrial production in the USSR by using data on steel consumption, fuel consumption, and electric power with the aid of correlation studies between trends in these components and trends in over-all industrial output in non-Communist countries, where statistics on both are more adequate than those available for Communist countries. The formula which he derives in this manner, when applied to data on available steel, fuel, and electric power, gives an index for the USSR which shows an average annual increase in industrial output of 16 percent. The same procedure used for Communist China would yield an estimate of 17.5 percent.

Because much research remains to be done on the industrial output of Communist China, because there are wide differences in estimates of the rate of increase of Soviet industrial output, and because there are inherent difficulties in the comparison of two different economies at widely separated periods of time, no clear-cut conclusions are possible as to comparative trends. It is clear that industrial output in Communist China is characterized by increases in output of light industry that are much higher in relation to increases in heavy industry than those which occurred during the Soviet First Five Year Plan. A glance at Table 2* shows that output of light industry in Communist China increased significantly during its First Five Year Plan, whereas output of the same industry failed to increase significantly during the Soviet First Five Year Plan and in many cases declined.

In comparing the development of heavy industry, trends during the First Five Year Plan in the USSR showed somewhat higher increases in the production of primary energy and significantly lower increases in steel production, and probably correspondingly lower increases in machinery output, when compared with Communist China. Table 6** compares the trends in primary energy and in steel output. The much smaller rate of increase in steel output in the two plan periods is not due to failure of the Soviet plan to invest in the steel industry but to the fact that Chinese output in 1952 was below capacity and in 1957 fully utilized, whereas the reverse took place in the period of the Soviet First Five Year Plan. Steel capacity in the USSR is estimated to have increased by 2.76 million tons in

* P. 9, above.

** Table 6 follows on p. 18.

Table 6

First Five Year Plans, Communist China and the USSR:
Production of Primary Energy and Steel ^{a/}

Production	Year Before First	Last Year of First	Last Year of Second	Average Annual Increase During First Five Year Plan (Percent)	Average Annual Increase During Second Five Year Plan (China Projected) (Percent)
	Five Year Plan (1952, China; 1927-28, USSR)	Five Year Plan (1957, China; 1932, USSR)	Five Year Plan (1962, China; 1937, USSR)		
Primary energy	Million Metric Tons of Standard Fuel Equivalents ^{b/}				
China	60.2	120.3	201.6	14.8	10.9 (19.7) ^{c/}
USSR	51.5	94.6	170.4	16.0	12.0
	Thousand Metric Tons				
Steel					
China	1,350	5,235	12,000	31.1	18.0 (23.4) ^{c/}
USSR	4,251	5,927	17,730	8.1	24.5

a. For sources of estimates of production, see Table 3, p. 11, above.

b. Standard units of fuels at 7,000 kilocalories per kilogram (k/cal/kg). Conversions used for Chinese production are as follows: 1 ton of coal to 0.9286 ton of standard fuel, 1 metric ton of petroleum to 1.43 tons of standard fuel, and 1 million kilowatt-hours (kwh) of hydroelectric power to 0.658 ton of standard fuel. Conversions used for Soviet production are as follows: 1 metric ton of coal to 0.9143 ton of standard fuel, 1 ton of peat to 0.4464 ton of standard fuel, 1 ton of petroleum to 1.43 tons of standard fuel, and 1 million kwh to 0.658 ton of standard fuel. The term primary fuel as used excludes fuelwood and other fuels largely used in household consumption. Peat production is included in the Soviet figures because it is an important source of industrial fuel.

c. Figures in parentheses represent "struggle" goals that are not yet embodied in specific planning.

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4 years, ^{53/} an average of 0.69 million tons a year, compared with an increase for China of 2.23 million tons in 5 years, ^{54/} an average of 0.45 million tons a year. The Soviet investment effort in the steel industry was therefore more than half again higher, but production lagged badly. Much of the Soviet investment effort, therefore, did not show up in production until the Soviet Second Five Year Plan, when the average annual increase in steel output was three times that for the First Five Year Plan.

C. Trends in Other Sectors.

Total ton-kilometers and passenger kilometers in the USSR increased at an average annual rate of 20 percent. The comparable figure for Communist China is 17 to 18 percent. Employment trends in Table 5* can be used to compare other sectors of the economies. Workers in construction in the USSR increased at an average annual rate of about 44 percent compared with an average annual rate from 1952 through 1956 for China of about 30 percent. The number of employees in communal services in the USSR increased at an average annual rate of nearly 14 percent compared with an average annual rate of about 8 percent for China. The number of state administrative employees increased at an average annual rate of about 13 percent in the USSR compared with a negligible increase for China.

IV. Economic Policies.

A. Learning from the USSR.

The Chinese Communists embarked on their First Five Year Plan with the important advantage of being able to learn from Soviet experience. This Five Year Plan formally began in 1953 but proceeded under annual targets in its first 2 years and was not actually drawn up as a 5-year program until 1955. The fact that the Chinese were able to initiate a comprehensive plan at all, however, only 5 years after acquiring political control of China, was possible because the USSR had painfully discovered and pioneered the concept and the machinery of central planning and direction of a socialist economy.

The Chinese were able to adopt the industrial ministry administrative structure which had been slowly developed by the USSR throughout its First and Second Five Year Plans. In addition to the anti-inflationary policies developed during the civil war in China, the Chinese borrowed fiscal and monetary policies from the USSR, with the result that there was relatively little price inflation during the period 1952-57. In contrast, the USSR suffered a 2.5-fold price rise during its First Five Year Plan.

* P. 15, above.

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The application of Soviet experience was facilitated by the assistance of a large number of Soviet advisers. The advisers were important not only in the setting up of the administrative and planning machinery but also in almost every phase of development during the First Five Year Plan.

Not only Chinese economic administrative machinery but also specific economic policies were a close imitation of recent Soviet practice. This was broadly true of foreign trade, investment, and technology policies. It was less true in agricultural development and labor allocation policies. Perhaps even more important than the imitation of the USSR was the avoidance of some of the gross errors of the Soviet First Five Year Plan. This was especially true in the collectivization of agriculture, which the Chinese carried out without serious disruption. In the socialization of industry and in the time scheduling of investment, the Chinese also avoided Soviet mistakes and achieved better results. These policies are discussed in more detail below.

By the end of the First Five Year Plan the Chinese had begun to be a good deal less imitative. Independent initiative and originality appeared in policies for the development of both agriculture and industry and in the administrative organization of the economy.

B. Socialization Policies.

Chinese Communist policies for socialization followed closely those established by the USSR during its First Five Year Plan. Socialization of agriculture in Communist China proceeded even more rapidly than in the USSR. From a negligible percentage of the Chinese farm population in cooperatives or state farms in 1952, more than 96 percent of the Chinese farm population were organized in producer cooperatives by 1957. In the USSR the percentage was a little less than 5 percent in 1928 and more than 60 percent in 1932. The same relative trend also exists in industry except for the emphasis in China on joint state-private enterprises as the main vehicles for socialization of industry. Of total output in 1928 in the USSR, about 90 percent was contributed by state and cooperative industry, and by 1932 the percentage had risen to 99.5 percent. In China in 1952, state and cooperative industry including handicrafts contributed 56 percent of total output, and joint state-private enterprises contributed another 4 percent. Private industrial enterprises still contributed 40 percent of output. By 1957, state and cooperative industry and handicrafts in China contributed 72 percent of total output, joint state-private enterprises 27 percent, and private industry and handicrafts about 1 percent. During the Chinese First Five Year Plan, therefore, socialization proceeded so rapidly

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that it more than made up for the lesser degree of state control over the economy at the beginning of the plan when compared with the Soviet economy.

The success of agricultural socialization in China is in sharp contrast with the failure of the same program in the USSR. Chinese livestock production and supplementary farm production were affected by the socialization of agriculture, but not to the point of wholesale liquidation of livestock and not to the point of control by the bayonet. A number of factors were involved in the much more skillful Chinese Communist reorganization of agriculture. First, the lower average productivity of the Chinese farm population gave individual farm households a much lower potential for resisting state control than in the USSR. In addition, only a few years had passed since the land redistribution program, and private ownership of the redistributed land had not yet been established to a point at which resistance could be made to still further changes in the system of organization. Moreover, the timing of agricultural socialization in China was more propitious for the Communist leaders than in the USSR. In China, agriculture was still in a period of recovery, and the relatively poor agricultural crop years of 1953 and 1954 occurred in the early years of the First Five Year Plan before socialization was carried out. In the USSR, on the other hand, agricultural output had already reached its period of recovery before the First Five Year Plan, and socialization took place during the same years when weather conditions were less favorable. The final factor was the nature of the reorganization taken. In the USSR, collectivization was accompanied by the program for mechanization, requiring tremendous changes in the system of agricultural production as well as in the economic institutions of the countryside. In China, on the other hand, collectivization took place in a period when the emphasis on increasing agricultural output was still in the traditional framework of increases in irrigation and in improvements in application of fertilizer and other labor-intensive methods of cultivation.

In adopting the joint state-private enterprise as the main initial form for socialization of industry, the Chinese Communists chose a form of organization that permitted greater use of the managerial talent of the "capitalist" class while firmly cementing state control over industry. The cooperative form of organization was used in relation to the large manpower potential of the individual handicrafts sector, and this too permitted the absorption of the private sector with a minimum effect on production.

Changes occurred in 1958 in Chinese economic organization that show a marked departure from the Soviet pattern of socialization.

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In agriculture a campaign for establishing communes reached sweeping proportions. The commune, a form of organization based on large areas usually centered on market towns, is aimed at combining agricultural, industrial, and trading activities in one inclusive organization with workers organized in labor brigades. The goals are said to be greater division of labor and fuller use of women in the labor force, with collective eating places and nurseries relieving them of household duties. In industry, greater stress had been laid on local industry, and this emphasis continued in the organization of the new communes. The planning mechanism has been changed to permit greater incentives for local government to expand production for local needs.

C. Consumption and Saving.

Only in the last year of China's First Five Year Plan did total investment command as large a share of output as in the USSR in 1928. As shown in Table 7,* investment in the Soviet economy constituted 21 percent of GNP in current prices in 1928, nearly 27 percent in 1934, and about 19 percent in 1937. These figures can be compared with estimates for Communist China of about 15 percent in 1952 and nearly 20 percent in 1957. During the Soviet Second Five Year Plan the proportion for defense expenditures increased until they commanded the same proportion of output as China's military expenditures in 1952 when it was engaged in the Korean War.

Estimates of GNP in current prices do not, however, tell the whole story. Price changes for China were relatively gradual, whereas a drastic change in the system of taxes occurred in the USSR during its First Five Year Plan with the introduction of large turnover taxes on consumer goods. Data do not permit an estimate of Soviet GNP, by end use, in 1932 in 1928 prices, but the nature of the trends in investment and consumption that occurred can hardly be questioned. Investment increased sharply while consumption declined. In China, in contrast, investment increased while permitting significant increases in consumption.

In 1928, state and cooperative investment in the USSR comprised 12.5 percent of total GNP. By 1932, state and cooperative investment, not including inventories, in estimated 1928 prices was equivalent to more than 42 percent of total GNP in 1928. 55/ In Communist China the figures for state investment are 5.5 percent in 1952, and state investment in 1956 in comparable prices was equivalent to 24 percent of total GNP in 1952.

* Table 7 follows on p. 23.

Table 7

First Five Year Plans, Communist China and the USSR:
Allocations of Gross National Product, by End Use, in Current Prices

	Communist China ^{a/}		USSR ^{b/}					
	1952	1957	1928 ^{c/}	1934 ^{d/}	1937 ^{e/}			
	Billion Yuan	Percent	Billion Rubles	Percent	Billion Rubles	Percent		
Consumption of households	50.77	74.8	22.60	69.4	88.7	62.5	183.5	62.9
Communal services	1.39	2.0	1.60	4.9	8.6	6.1	27.4	9.4
Government administration, including security forces	2.16	3.2	2.81	2.5	0.82	2.0	7.4	2.5
Defense	4.37	6.4	5.51	4.8	0.76	2.3	17.5	6.0
Gross investment	10.09	14.9	22.84	20.0	6.79	20.8	56.1	19.2
Net foreign investment	-0.92	-1.3	+0.51	+0.4	0	0	0	0
Gross national product	67.86	100.0	114.45	100.0	32.57	142.1	291.8	100.0

a. 56/
b. Totals are derived from unrounded data and may not agree with the sum of their rounded components.

c. 57/
d. 58/
e. 59/

Investment during the Soviet First Five Year Plan, therefore, started from a much higher proportion of output for investment and rose more rapidly during the period than during the Chinese First Five Year Plan. This rise in Soviet investment took place in spite of a decline in agricultural output and a serious decline in consumption. In the USSR, average annual wages for workers and staff in 1932 were 203 percent of 1928, but (based on an index in constant prices of state and cooperative trade) 60/ retail prices were 249 percent of 1928. This rapid inflation indicates a decline in purchasing power of nearly 20 percent. The decline in real farm income was probably even more. Communal services, however, increased significantly. Rising investment in Communist China, on the other hand, was not accompanied by a similar decline in consumption. Retail prices rose by 11 to 12 percent, and real wages for workers and staff increased by about 25 percent, from 1952 to 1957. 61/ Real farm income increased much more slowly, but the trend in no way resembled the trend in farm income during the Soviet First Five Year Plan.

D. Allocations of State Investment.

Investment policies during the Chinese First Five Year Plan were much the same as those during the Soviet First Five Year Plan. Table 8* presents the relative shares of state investment for each sector during each of the two First Five Year Plans. The figures for state investment are not comparable, because the Chinese figures include only expenditures for increasing fixed assets and the Soviet figures include miscellaneous expenditures by economic departments other than expenditures for working capital. Rough adjustments are made in the Chinese figures by including estimated major repairs and expenditures for geological surveying and prospecting under industry and related budget expenditures for agriculture. These adjustments are subject to a wide margin of error, but they serve for purposes of the comparison.

As shown in Table 8,* the two investment plans emphasized heavy industry and transportation. The proportions of investment for light industry and communications are somewhat lower in China. The Chinese allocation to heavy industry, however, was even greater than in the Soviet First Five Year Plan, and the Chinese allocation to agriculture is lower than in the Soviet pattern of investment. Somewhat more of agricultural investment in the Chinese First Five Year Plan was planned to be financed by the agricultural sector outside the budget, but the main difference in investment policy was the nature of the agricultural investment undertaken (see below).

* Table 8 follows on p. 25.

Table 8
First Five Year Plans, Communist China and the USSR:
Capital Investment, in Current Prices

	Communist China			USSR		
	First Five Year Plan (1953-57)	Last Quarter of First Five Year Plan (1928-32) ^{a/}	Capital Investment	Capital Investment	Percent	
	Actual Capital Construction (Million Yuan)	All State Investment	Capital Construction (Percent)	All State Investment	Million Rubles	
Industry	27,380 ^{b/}	33,120 ^{c/}	56.1	56.3	24,789	49.1
Heavy industry	24,310 ^{d/}	29,150 ^{e/}	49.8	49.5	21,292	42.2
Light industry	3,070 ^{f/}	3,970 ^{g/}	6.3	6.7	3,497	6.9
Transportation, post and telecommunications	9,195 ^{h/}	9,195	18.9	15.6	9,498	18.8
Agriculture, forestry, and water conservancy	3,781 ^{i/}	8,100 ^{j/}	7.8	13.8	9,687	19.2
Water conservancy	2,370 ^{k/}				1,000	
Urban public utilities	1,334 ^{l/}	1,334	2.7	2.3	1,850 ^{m/}	3.7
Culture, education, and health	4,059 ^{n/}	4,059	8.3	6.9	2,250	4.5
Other ^{o/}	3,028	3,028	6.2	5.1	2,428	4.8
Total ^{p/}	48,771	58,836	100.0	100.0	50,502	100.0
Of which						
Urban housing	4,260 ^{q/}	4,260	8.7	7.2	4,049	8.0

a. ^{62/} b. ^{63/} c. ^{64/} d. ^{65/} e. ^{66/} f. ^{67/} g. ^{68/} h. ^{69/} i. ^{70/} j. ^{71/} k. ^{72/} l. ^{73/} m. ^{74/} n. ^{75/} o. ^{76/} p. ^{77/} q. ^{78/}

Major repairs and general geological surveying and prospecting are included under industry, with the latter the same proportion of supplementary budget expenditures for capital construction as in the First Five Year Plan. Thirty percent of major repairs are estimated for light industry on the basis of the ratio for total fixed assets. ^{65/} All geological and prospecting expenditures are probably for heavy industry.

The USSR includes urban electric power stations, which are probably excluded from the Chinese figures.

Residual of the Chinese investment is composed of the categories of Trade, Banking, and Stockpiling and of Other Items.

Totals are derived from unrounded data and may not agree with the sum of their rounded components.

*
E. Investment in Relation to Output.

The impact of state investment on the economy can be roughly measured by comparing the size of the investment for the 4 years -- 1929-32 for the USSR and 1953-56 for China -- against the income originating in the sector in 1928 in the USSR and in 1952 in China. Table 9* presents this comparison.

Table 9 shows that the Soviet state mobilization of resources in relation to the output at the start of the First Five Year Plan was 2.5 times the state mobilization of resources for investment during the Chinese First Five Year Plan. Since it is probable that the total output in the two economies increased at a comparable rate, Table 9 indicates a more successful use of resources for investment for China than for the USSR. For Communist China the higher percentage of investment for heavy industry and the smaller sector contribution of heavy industry and construction combined to furnish nearly as high a ratio of investment in heavy industry and construction for China as for the USSR. The poorer Soviet showing is mainly due to the trends in agriculture and light industry. When allowance is made for nonstate agricultural investment, as shown in Table 9, the ratio of Soviet investment to output in 1928 is 1.3 to 1, nearly 4 times the comparable ratio for China of 0.33 to 1. As agricultural output in the USSR declined by 20 percent, the failure of the Soviet agricultural program is obvious. The small increase in production of light industry in the USSR, in spite of a higher ratio of investment to output, reflects the impact of declines in agricultural output on light industry, and China's output of agricultural raw materials expanded significantly.

Transportation and communications received comparable amounts of investment and increased at comparable rates during the two Five Year Plans. Although Soviet investment in trade, communal services, government, and other nonagricultural sectors was twice the ratio of investment to output, income originating in communal services and government undoubtedly increased much faster than in China, as large increases in labor force in these sectors occurred in the USSR compared with very small increases in China.

In comparing the more favorable increases in Chinese agricultural and industrial production as the result of investment, much of the difference is due to a comparison limited to the time periods of the respective First Five Year Plans. In 1937, agricultural output in the USSR was about 20 percent higher than in 1928 and 50 percent higher than in 1932. The average rate of increase in industrial

* Table 9 follows on p. 27.

Table 9
Communist China and the USSR: Comparison of Investment
with Income Originating, by Economic Sector

	Communist China		Ratio of Investment to Income Originating	USSR		Ratio of Investment to Income Originating
	Income Originating in 1956 Prices a/ 1956 Prices a/	State Investment for 1953-56 in 1956 Prices b/		Income Originating in 1928 Prices c/	State Investment for 1929-32 in 1928 Prices d/	
Economic Sector						
Heavy industry and construction	4.90	20.32	4.15 to 1	3.70	16.35	4.42 to 1
Light industry e/ Transportation and communications	3.69	2.77	0.75 to 1	2.68	2.68	1.00 to 1
Agriculture f/	1.85	6.80	3.68 to 1	2.57	9.38	3.65 to 1
All other g/	45.30	6.11	0.13 to 1	13.37	10.10	0.76 to 1
	17.41	6.07	0.35 to 1	7.58	5.43	0.72 to 1
Total	73.15	42.07	0.58 to 1	29.90	43.94	1.47 to 1
Allowance for non- state investment						
Agricultural		8.87 h/			7.30 g/	
Nonagricultural		2.37 h/			Negligible g/	
Total, including nonstate invest- ment		53.31	0.73 to 1		21.24	1.71 to 1

a. For sources, see Table 1, p. 8, above.
 b. Year-by-year figures deflated by investment cost index. 71/
 c. Income originating as shown in Table 1, p. 8, above, with adjustments in sectors. The sector on industry and construction is allocated as follows:
 based on Soviet national income figures, 72/ income originating in small-scale industry is estimated as 1.6 billion rubles and construction as 1.7 bil-
 lion rubles. On the basis of profits figures given by Hoefding, 73/ approximate labor force allocations to heavy industry, and depreciation allocated
 in accordance with total fixed assets, income originating in heavy industry is estimated at 2.0 billion rubles, leaving light industry as the residual.
 d. From figures given in source 74/ converted to constant 1928 prices by the index given 75/ for industrial investment and for over-all investment,
 with the same index used for all state investment other than industrial investment.
 e. Small-scale industry is included under the item "all other."
 f. Including farm consumer services and house rent.
 g. Hoefding estimates that state investment was 16 percent of total agricultural investment in 1928. Private agricultural investment was
 probably negligible by 1932. A simple average of the two percentages is used as an approximation of nonstate agricultural investment during the
 period. Nonagricultural nonstate investment is estimated as negligible in 1928.
 h. Based on investment as estimated, 76/

fixed assets was about 20 percent lower in the Soviet Second Five Year Plan than in the First Five Year Plan, but the rate of increase in industrial output was perhaps one-fifth higher in the Second Five Year Plan than in the First. The Soviet economy, therefore, did not benefit from a significant portion of investment during the First Five Year Plan until the period from 1933 through 1937. Investment during the Chinese First Five Year Plan probably showed more immediate gains in output, and output during the Chinese Second Five Year Plan is therefore not likely to show a similar upsurge from greater utilization of investment undertaken during the First Five Year Plan.

Another important factor in the more favorable results of the Chinese First Five Year Plan has already been noted above. Communist China's agriculture and industry had not reached potentials that had been built up in the pre-Communist period, and the period of recovery and restoration extended well into the period of the First Five Year Plan.

The most important factor, however, was that much of Soviet investment, particularly in agriculture, was offset by severe social and economic disorganization, and such social and economic disorganization did not occur in any comparable degree in Communist China during its First Five Year Plan. In addition to the social and political dislocations involved, Soviet investment in agriculture was largely aimed at changing the nature of the techniques of agricultural production and releasing farm manpower for industry.

F. Agricultural Development Policy.

A radical difference in the nature of the Chinese and Soviet economies resulted in Chinese development policies for agriculture that were quite different from those in the Soviet program. As has been indicated, Soviet farm per capita output was more than twice that of the Chinese farm population, and the Chinese standard of living was correspondingly lower and excess manpower in China's agriculture, particularly in the off-season, was correspondingly higher. Weather conditions provided a greater potential for increasing output by irrigation and other measures to take advantage of China's greater resources of water. The Chinese program for agriculture depended largely on exploiting the greater manpower potential and the greater potential for irrigation to increase output. The Soviet program aimed instead at raising farm productivity through mechanization to permit transfers of farm labor into the nonagricultural sectors.

In China, half of total state investment in agricultural capital construction was spent on large-scale water conservancy projects, and another 12 percent on small-scale local irrigation projects.

*
These expenditures were therefore nearly 30 percent of all state agricultural expenditures including dike repairs and miscellaneous development expenditures. This portion of investment was therefore directed at improving and developing agricultural production along traditional and well-established lines, stressing labor-intensive methods of agricultural production. In contrast, only 10 percent of Soviet agricultural investment was spent on irrigation and land reclamation. 77/

In China the agricultural area "mechanized" in 1957 is said to be 2.7 percent of the total sown area, and even this area was probably not mechanized by Soviet standards. In China the number of tractors in tractor stations in 1957 is given as 12,036 standard units -- 180,500 horsepower (hp). This is equal to 0.36 hp per 1,000 members of the farm population in 1957. In contrast, by 1932 about half of the total sown area in the USSR was mechanized. Nearly one-third of state agricultural investment during the Soviet First Five Year Plan was directed to additional farm equipment and machinery. From October 1929 through 1932, 144,458 tractors (2,278,161 hp) were supplied to the agricultural sectors. By 1932, available tractors were equivalent to 19.43 hp per 1,000 members of the farm population, more than 50 times the negligible amount of horsepower per capita in the Chinese farm population. Large numbers of motor vehicles were also supplied as against virtually no emphasis on such types of equipment in Communist China. Soviet agricultural investment was therefore directed toward raising the productivity of farm labor and not necessarily directed toward raising agricultural yields. In practice, however, this increase in agricultural machinery was largely offset by a loss of draft animals for farm production.

In 1956, when the pace of socialization of agriculture in China was increased greatly, some increases were made in the percentage allocation of investment funds for agriculture. In 1958, allocations were further increased, with the main emphasis still placed on irrigation and other labor-intensive methods of increasing agricultural production. The USSR did not give similar emphasis to increasing agricultural output until 1953.

G. Labor Policy and Technology.

At the beginning of the Soviet First Five Year Plan, the supply of labor was smaller in relation to land and capital than in China, and average productivity was much higher, and yet the Soviet First Five Year Plan was characterized by a large-scale shift in the labor force from the agricultural to the nonagricultural sectors. In Communist China, however, with a larger supply of labor, official policy was directed toward holding the migration of peasants into

the cities to a minimum -- probably a result of a conscious determination not to repeat the mistakes of the Soviet First Five Year Plan.

1. Occupational Distribution of the Labor Force.

An analysis of the figures in Tables 4* and 5** illustrates a fundamental difference in occupational distribution of the labor force between the Soviet and the Chinese First Five Year Plans. In 1928, 78.9 percent of the Soviet population was supported by agriculture; 8.8 percent by industry, including individual handicraft, construction, and transportation and communications; and 12.3 percent by trade, government, and other services. By 1932, 17.5 percent of the Soviet population was supported by industry, construction, and transportation and communications -- an average percentage change of more than 2 percent a year. The percentage of the population in agriculture declined by 6.5 percent -- from 78.9 percent to 72.4 percent. The percentage supported by trade, government, and other services declined by 2.2 percent in the period of the First Five Year Plan. In Communist China, however, the population supported by industry, construction, and transportation and communications increased from 5.7 percent in 1952 to 7.5 percent in 1957 -- an average annual increase of about 0.4 percent a year. As the percentage of the population in trade, government, and services remained about the same, the percentage for the agricultural population declined by a similar amount, or an average annual change of 0.4 percent a year. Moreover, the ratio of dependents to workers and staff in the USSR decreased from 1.2 per employee to about 1.0 per employee, whereas the ratio in China is given as 2 dependents per employee in 1956 and probably was about the same ratio in 1952.

In absolute figures the Soviet agricultural population declined at an average annual rate of more than 1 percent, whereas the Chinese agricultural population increased by more than 1 percent a year. Disregarding the number of nonwage workers in the private sector that were converted into workers and staff, workers and staff during the Soviet First Five Year Plan increased at an average annual rate of 11 percent compared with an increase of 5 percent for the Chinese First Five Year Plan. The contrast in the increases in labor force in the sectors directly associated with industrialization is even more striking. During the Soviet First Five Year Plan, workers and staff in industry (excluding individual handicraft, construction, and transportation and communications) increased at an average annual rate of about 22 percent, compared with an average annual increase in labor force in these sectors in the Chinese First Five Year Plan of a little less than 6 percent.

* P. 13, above.

** P. 15, above.

2. Productivity.

The Chinese First Five Year Plan was more successful than the Soviet Plan in increasing productivity. Per capita output in Chinese agriculture increased slightly, by about 1 percent a year compared with a decline of about 4 percent a year for Soviet agricultural output. Hodgman 78/ estimated the productivity of workers of large-scale industry in 1932 as 92 percent of 1928. The productivity of workers in large-scale industry during the Chinese Five Year Plan increased at an average annual rate of more than 10 percent. Part of this difference in trends is due to the fact, already referred to, that the first part of the Chinese Five Year Plan was still a period of recovery, and part is due to the much higher per capita output already achieved by the Soviet economy before the Five Year Plan. After allowing for these factors, it is still likely that in the Soviet Five Year Plan period the crisis in the countryside and other pressures caused greater additions to the nonagricultural labor force than could be efficiently utilized. As Hodgman points out, however, these transfers of untrained workers provided a potential for increasing productivity during the Second Five Year Plan as these workers acquired the necessary skills.

3. Investment and Labor Force During the Two Five Year Plans.

With regard to nonagricultural investment as discussed above, Soviet investment in relation to output is shown in Table 9* to be 1.5 times that of China. At the same time, workers and staff in the USSR increased more than twice as fast as in Communist China. One indication of the extent to which workers are furnished with machinery and equipment in production is the primary energy available. Primary energy is of course made available for household consumption and for the agricultural sector, but production of primary energy in relation to labor force can be used as a rough indicator of changes in the technology of production. Table 10** presents this comparison.

Although per capita output of primary fuels increased more rapidly in the USSR than in China, output per member of the nonagricultural labor force in the USSR increased about 60 percent as rapidly as in China, and output of fuel per employee in industry and transportation -- the primary users -- actually declined whereas Chinese output per employee in these sectors increased rapidly. Because an increasing amount of petroleum output in the USSR was used for the growing number of tractors in the agricultural sector, the decline in actual fuel available per employee must have been greater than shown in Table 10.

* P. 27, above.

** Table 10 follows on p. 32.

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* Table 10

First Five Year Plans, Communist China and the USSR:
Per Capita Production of Primary Energy for Selected Segments
of the Population

<u>Production</u>	<u>1952, China; 1926, USSR</u>	<u>1957, China; 1932, USSR</u>	<u>Average Annual Change (Percent)</u>
Per capita output			
China	105	190	12.6
USSR	343	611	15.5
Per member of the nonagricultural labor force			
China	1,381	2,278	10.5
USSR	3,558	4,517	6.2
Per worker in large- scale industry and transportation and communications			
China	9,423	13,780	7.9
USSR	11,812	11,041	-1.7

The same general trends in the technical level of industrial production and in other nonagricultural sectors can be shown in figures on fixed assets, although the data for China are far from satisfactory. Industrial fixed assets in the USSR in million 1933 rubles at replacement value increased at an average annual rate of about 25 percent, 79/ but, as workers in large-scale industry increased at an average annual rate of about 20 percent and workers in construction increased at an average annual rate of about 44 percent, there could have been little change in the amount of machinery and equipment per employee, and probably a small decline. In China, industrial fixed assets in current prices, probably at replacement value after 1949, increased from 1952 to 1957 at an average annual rate of about 20 percent. As employees in industry in 1952-57 increased at an annual rate of about 6 percent and construction workers at a rate

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of a little less than 25 percent, significant increases probably took place in the amount of machinery and equipment per employee. In agriculture, on the other hand, the rural population in the USSR declined, and large increases took place in available machinery for agricultural production. In China, no such shift took place.

It is therefore an ironic fact that in the USSR, where labor was in shorter supply, the energy and the machinery and equipment available per worker in the sectors directly associated with industrialization -- large-scale industry, construction, and transportation -- actually declined. In Communist China, on the other hand, where the labor supply was much greater, the energy available, and probably the machinery and equipment available for these sectors, increased significantly during the First Five Year Plan. On the other hand, in both energy and machinery and equipment available for the agricultural labor force, the trends were reversed, as the USSR concentrated on the mechanization of agriculture and China concentrated on an agricultural program that stressed labor-intensive methods for increasing agricultural production. One is tempted to conclude that the Chinese Communists have proceeded to avoid the worst mistakes of the Soviet First Five Year Plan, but also in a manner that was not calculated to take full advantage of China's more ample labor supply. The crucial question here is whether a different program -- by which greater labor-intensive methods would be used in large-scale industry and greater distribution of investment and of energy to other sectors, such as agriculture and trade -- would have had a greater return in terms of over-all increases in output than the policies adopted. Certainly the problems of organization and management in view of the limited supply of technical and managerial talent in China would make such a step more difficult than in the USSR and might offset the advantage for the Chinese Communist planners, particularly because such a program would involve a departure from the Soviet model on which the First Five Year Plan was based. In addition, a greater shift of labor into industry, construction, and modern transportation would create further inflationary pressures, involving increased problems in the control over consumer goods and requiring still greater increases in control over the distribution of agricultural output.

At the present time the Chinese Communists are putting increased emphasis on small-scale production at the local level. This marked departure from the Soviet model used in the First Five Year Plan involves a greater diversification of investment and greater increases in the labor force in relation to available energy and machinery and equipment. It is claimed that this policy could not have been applied earlier, because of a limited amount of skilled manpower and a lack of the necessary industrial base to produce the equipment involved. 80/ The concentration on larger, capital-intensive construction projects may have used more efficiently the technical aid

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furnished by the USSR and may have simplified the procurement of machinery and equipment for import. Nevertheless, it is possible, if not probable, that greater emphasis on small-scale industrial production could well have been adopted earlier in Communist planning instead of being delayed until the period of the Chinese Second Five Year Plan.

H. Foreign Economic Trade Policies During the Two Five Year Plans.

Foreign trade was not as important to the Soviet economy as it was to China. In 1928, Soviet imports and exports were equivalent to about 5 percent of Soviet GNP in current prices (see Table 7*). In 1952, China's imports and exports were equivalent to about 10 percent of China's GNP, and in 1957 they were 9 percent of China's GNP in current prices. Imports were also much more important for China's investment program than for the USSR. During China's First Five Year Plan, imports of machinery equipment, excluding military imports, were equal to about 17 percent of total state investment (see Tables 8** and 11***). Imports of machinery and equipment for the USSR from 1928 through 1932 constitute about 5 percent of total state and cooperative investment.

In view of the emphasis that is often placed on Soviet credits as an aid to Chinese economic development, it is interesting to note that, aside from invisible exports and gold shipments, the surplus of Soviet imports above exports from 1928 to 1932 was equal to 12 percent of total imports. During China's First Five Year Plan the surplus of imports above exports was equal to about 7 percent of total imports for the 5-year period 1953-57. Soviet indebtedness abroad is reported to have reached a maximum of 1.4 million rubles in 1931, 81/ equal to 1.7 times the average annual exports for 1928-32, or about 4 percent of Soviet GNP in 1928. Chinese indebtedness to the USSR reached a maximum of 4.7 billion yuan by the end of 1955, 82/ or about the same as the average annual exports for 1953-57 -- about 7 percent of its GNP in 1952. The USSR therefore received more in the way of credits in relation to its foreign trade during its First Five Year Plan and the period preceding it than Communist China received during its First Five Year Plan and the period preceding it. Aid constituted, however, a lower proportion of total output in the USSR than in China. Two-thirds of Chinese credits, however, were in support of military imports devoted to strengthening the Chinese military establishment, and Soviet indebtedness was much more largely channeled to the Soviet program of industrialization.

* P. 23, above.

** P. 25, above.

*** Table 11 follows on p. 35.

Table 11

First Five Year Plans, Communist China and the USSR: Foreign Trade

	Communist China a/ (1953-57)		USSR b/ (1928-32)	
	Million Yuan	Percent	Million Rubles	Percent
Exports.				
Agricultural products (including agricul- tural processed products)	18,120	77.5	3,042	73.0
Mining and industrial products	5,260	22.5	1,108	27.0
Total exports	<u>23,380</u>	<u>100.0</u>	<u>4,150</u>	<u>100.0</u>
Imports				
Machinery equipment and ferrous metal products	15,140	60	2,544.1	54
Of which, military supplies	5,050	20	N.A. c/	
Essential raw materials	7,570	30	1,719.3	37
Consumer goods	2,520	10	438.1	9
Total imports	<u>25,230</u>	<u>100</u>	<u>4,701.5</u>	<u>100</u>

a. 83/

b. 84/

c. Probably small.

The pattern of foreign trade was similar for the two countries, as shown in Table 11, with its emphasis on exports of agricultural goods and raw materials and on imports of machinery and equipment for investment with a minimum of consumer goods, but the Soviet pattern of trade reflects its relatively higher industrial base. Industrial exports are somewhat higher, and imports of essential raw materials for industrial production are significantly higher, for the USSR than for China. One-fifth of China's imports were for the military establishment, imports that could otherwise have been available for investment or consumption.

V. Prospects for Communist China in the Light of Soviet Experience During the Soviet First and Second Five Year Plans.

The Soviet experience during the First and Second Five Year Plans serves to call attention to certain trends and problems facing Chinese Communist planners in pursuing similar economic objectives. An analysis of the prospects for Communist China will be made in terms of two sets of assumptions, one of which is contrary to fact. The first assumption would be that Communist China continued as in its First Five Year Plan to model its policies and planning on the Soviet experience with only minor modifications. This is essentially the framework set forth in the proposals for the Second Five Year Plan announced at the Eighth Party Congress in October of 1956. The second assumption is that far-reaching changes in policies and planning are made which depart from the Soviet model. This second assumption represents what is actually taking place in 1958 in connection with the "leap forward" movement and the establishment of communes.

The policies in the two Second Five Year Plans as established in the USSR and as initially proposed in China represent a continuation of the policies established during the First Five Year Plans. The same similarities and differences appear. Socialization of agriculture in the USSR was a continuation and consolidation of the pattern of collectivization during the First Five Year Plan. Socialization had been completed in industry and trade, and the Second Five Year Plan was also a period of consolidation of already-established state control. Such a period of consolidation was implicit in the first announcements for the Chinese Second Five Year Plan, with the end of all payments to the private industrialists and traders for assets taken over by joint state-private enterprises to take place some time during the Second Five Year Plan.

The rate of increase in state investment was to be slowed down in each of the Second Five Year Plan periods. In each case, state investment during the Second Five Year Plan was to be about double that

of the First Five Year Plan. In the USSR, however, the average annual level of state investment in constant prices during the First Five Year Plan was more than three times the level of investment in 1928. The average annual investment in constant prices during the Second Five Year Plan was only about one-third higher than the level of state investment in 1932. In the proposals for the Chinese Second Five Year Plan the 1957 level of state investment had been cut by about 15 percent compared with 1956, and the proportion of total output for investment was expected to be about the same for the Second Five Year Plan as in the last few years of the First Five Year Plan.

The allocation of investment in the Soviet Second Five Year Plan was in general the same as in the First, with industry allocated somewhat more, and agriculture somewhat less, than in the First Five Year Plan. The Chinese proposals increased the allocation to agriculture and continued the emphasis on industry, with slightly more emphasis on light industry. As a result, a comparison of the two patterns of allocation shows them to be even more similar than in the two First Five Year Plans. The Soviet Second Five Year Plan continued to stress mechanization of agriculture and increases in farm productivity while the Chinese program still stressed irrigation, fertilizer, and labor-intensive modes of production.

The rate of increase in workers and staff in the nonagricultural sectors was slowed during the Soviet Second Five Year Plan, dropping from 11 percent a year to about 4 percent a year. Workers in industry and construction increased by 2.6 percent a year compared with 26 percent during the Soviet First Five Year Plan. The proposals for the Chinese Second Five Year Plan called for a rate of increase in workers and staff which was about the same as the 5 percent for the First Five Year Plan. Production of primary energy during the Soviet Second Five Year Plan increased at an average annual rate of 12 percent, and steel increased at an average annual rate of nearly 25 percent; with probably corresponding increases in machinery output, the amount of machinery and equipment and productive facilities per worker was improved enormously compared with the Soviet First Five Year Plan. Although little change probably took place in industrial fixed assets per worker in industry and construction during the Soviet First Five Year Plan, fixed assets per worker in industry were almost two-thirds higher in 1937 than in 1932. The Chinese Second Five Year Plan as outlined proposed the same general rate of increase in fixed assets per worker that occurred during the First Five Year Plan, and industrial investment was clearly expected to continue the emphasis on large-scale and capital-intensive projects.

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The Soviet Second Five Year Plan was on all counts successful. Agricultural output, which in 1932 was 80 percent of the 1928 level, had risen by 1935 to the 1928 level and in 1937 -- an unusually good year -- was about 20 percent higher than in 1928 and half again as high as in 1932. The rate of increase in over-all industrial output during the Second Five Year Plan was substantially higher than during the First Five Year Plan. More important was the balance achieved between light and heavy industry. The rate of increase in production of consumer goods was about three-fourths as fast as that of over-all industrial production.

The proposals for the Chinese Second Five Year Plan outlined a program giving greater emphasis to agriculture, and if this program had actually been put into effect, agricultural output could have been expected to increase by a significantly higher rate than during the First Five Year Plan. The rate of increase could not have been expected to be as high as during the Soviet Second Five Year Plan, because in this period Soviet agriculture recovered from the large declines experienced from 1931 to 1933. The targets established for industry and the projected levels of light industry output that would follow from the increases to be expected in agricultural output indicate that the rate of increase in industrial output during the Chinese Second Five Year Plan was expected to be no higher than during the Chinese First Five Year Plan, and probably somewhat lower. An acceleration of industrial growth as in the Soviet Second Five Year Plan could not reasonably be expected if the same planning framework had continued. In the first place, increases in industrial output in 1953 and 1954 in China represented in part results of the period of recovery -- a period which had already occurred in the USSR before its First Five Year Plan. In the second place, industrial output had increased more nearly in proportion to increases in industrial investment during the Chinese First Five Year Plan, whereas during the Soviet First Five Year Plan industrial investment had proceeded faster than the extent to which the new facilities were utilized for production. As the large numbers of industrial workers which were added during the First Five Year Plan gained new skills and the added capacity was more fully utilized, the Soviet Second Five Year Plan reflected corresponding gains in industrial production.

Actually the developments in 1958 show that the period of the Chinese Second Five Year Plan marks drastic departures from the Soviet model and from the framework of policies and planning for the Chinese First Five Year Plan. Agricultural development received all-out emphasis relying in the main on mass mobilization of farm labor and mass propagation of new agriculture techniques. Continuing development of large-scale projects was to be carried out as planned, but, in addition, resources were devoted to local industry

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and to small-scale industrial projects. This emphasis on labor-intensive industrial production was a deliberate effort to utilize China's manpower resources more efficiently. The scale of effort and the targets now established are such a new departure that it is not possible to predict the outcome except to say that such a program is better conceived to meet actual economic conditions in China than the close imitation of the Soviet model which was the basis of planning for the period 1953-57.

Not only have economic development programs for agriculture and industry changed radically upward to utilize China's huge labor supply more fully, but also socialization of agriculture has been supplanted by organization of most of China's population into communes. Instead of consolidating agricultural collectives along the lines already established, communes have been set up that are to cut across economic sectors, combining agricultural, industrial and commercial activities in a single organization locality. The institutional changes involved are so sweeping that it is impossible to evaluate them fully at this time. Neither the trends under the Chinese First Five Year Plan nor the trends under the Soviet First and Second Five Year Plans can be used as guide lines for projecting trends during the Chinese Second Five Year Plan. All that can be said is that China's manpower resources and its natural resources, if fully mobilized, will permit rapid industrial development and at least for a time relatively rapid agricultural development. If the new developments can be consolidated and Communist controls along such ambitious lines succeed, the rate of increase in output will be much higher than that originally projected for the Second Five Year Plan.

The "leap forward" program, however, is having the effect of transforming the Chinese economy from a labor-surplus economy to one in which labor will be in short supply in a very brief period of time. The gains achieved cannot be considered typical of trends in output thereafter, but the new developments may achieve a breakthrough in the relation of population to food supply and relatively quick gains in industrial output during the early years of the Second Five Year Plan. The social and political reactions to the organization of communes are the critical factors in the success or failure of the movement. These are even more difficult to predict. Only the passage of time will enable us to determine their effect on the economy.

APPENDIX

SOURCE REFERENCES

Evaluations, following the classification entry and designated "Eval.," have the following significance:

<u>Source of Information</u>	<u>Information</u>
Doc. - Documentary	1 - Confirmed by other sources
A - Completely reliable	2 - Probably true
B - Usually reliable	3 - Possibly true
C - Fairly reliable	4 - Doubtful
D - Not usually reliable	5 - Probably false
E - Not reliable	6 - Cannot be judged
F - Cannot be judged	

"Documentary" refers to original documents of foreign governments and organizations; copies or translations of such documents by a staff officer; or information extracted from such documents by a staff officer, all of which may carry the field evaluation "Documentary."

Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this report. No "RR" evaluation is given when the author agrees with the evaluation on the cited document.

All sources used in this report are UNCLASSIFIED and are evaluated RR 2.

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