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TRENDS IN PLANNED ECONOMIC DEVELOPMENT IN COMMUNIST CHINA 1952-62

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The principal economic planning measures of the Chinese Communist government have been indications of the progress which the leaders of the Chinese Communist Party think that they have made in eliminating what the leaders themselves call the "basic contradiction" between the existing backward small peasant economy and the state-controlled economy of modern industry. The Party line has been as "hard" as the leadership thought it could be with respect to extracting the maximum in investment resources from agriculture and light industry for the rapid development of heavy industry and as "soft" as the leadership thought it had to be in expanding consumer industries in order to offer material incentives to workers and peasants.

The bumper harvest of 1955 favored and the investment requirements of the Five Year Plans demanded the complete regimentation of all production under the control, allocation, and planning of the centralized administration. Mao Tze-tung, in his report of July 1955 on agriculture, after the relatively modest collectivization goals of the First Five Year Plan (1953-57) had already been accepted by the National Peoples Congress, called to task those Party members who had been guilty of "rightist conservatism" and pointed the way of rapid collectivization to coordinate agriculture with the program of industrialization. For the regime, this position constitutes a means, first, of assuring the realization of the goals of industrial investment; second, of providing more consumer goods as material incentives for workers and peasants; and, third, of possibly increasing agricultural investment.

As of September 1956, more than 90 percent of the agricultural households of Communist China were in low-level and higher level agricultural producer cooperatives. By spring of 1957, 90 percent of these households probably will be in the higher level collectives. An initial result of socialization of agriculture has been a drop in livestock numbers and in the output of the subsidiary or sideline

* The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 February 1957.

occupations of peasants. This development has meant a decrease in peasant income as well as in production of raw materials for some light industries. The regime has recognized the shortcoming in co-operative management by decreeing that where cooperatives are not organized especially to manage animal husbandry, the livestock should revert to individual control, and that peasants should be allowed more time for sideline production.

In industry, socialization has decreased the share of private enterprise in the ownership of industrial output to approximately 0.4 percent. The attempted socialization of handicraft producers does not appear to have been completely successful. Urban handicraft production appears to be completely under state control, whereas rural handicraft production, often a sideline activity of the peasants, does not appear to be so completely controlled. The full impact of drastic and rapid change will not be apparent for some time to come.

In commerce the wholesale trade is wholly state controlled. The policy of socialization of retail trade has evidently been relaxed in the realistic interest of providing flexibility in an economic sector where the intricacies and expense of maintaining direct state control are unprofitable. Although a "free market," encompassing about one-quarter of the total retail value, is being sanctioned, the state remains in indirect control.

The Eighth Party Congress, in September 1956, was the climax of the program for 1956 of hundreds of conferences on past progress, present policies and programs, and future plans. The atmosphere created by the reports of the Party leaders to the Congress was one of satisfaction with accomplishments and confidence in the future growth and consolidation of national strength under the economic planning and administration of the Party leadership. The final Party resolution on the proposed Second Five Year Plan (1958-62) approved the early completion of the socialist transformation of agriculture, industry, and commerce and fixed the general goals of the Plan at doubling industrial output and increasing agricultural output by 35 percent. These goals were to be accomplished by doubling state investment in capital construction in the Second Five Year Plan compared with the First.

The 12-year Draft National Program for the Development of Agriculture, promulgated on 23 January 1956, detailed the methods by which the goal of doubling or tripling agricultural production by 1967 was to be achieved, including the long-needed large-scale flood-control

and irrigation projects on the largest rivers of China and a more extensive use of domestically produced chemical fertilizers beginning in the Third Five Year Plan (1963-67). The principal anticipated results of the application of the new program were to be realized from the planned labor-intensive efforts of the cooperatives.

The measures for improvement of agriculture are to be provided for out of the over-all doubling of investment in the Second Five Year Plan compared with the First, including an increase from 7.6 percent of total investment funds allocated for agriculture in the First to 10 percent of total investment funds in the Second, which in absolute terms amounts to an increase for agriculture of about 260 percent -- from 3.2 billion yuan* ($1.3 billion) to 8.5 billion yuan ($3.4 billion).

It is clear from the plans that were promulgated and from the intensive organizational and productive efforts that were put forth in 1956 that the Chinese Communists have finally evolved an integrated plan for the development of agriculture -- a plan which is deficient in only one major aspect (the amounts of chemical fertilizers to be utilized) and which they hope to remedy in time. As was emphasized by Mao Tze-tung, the basic premise of the Chinese Communists, in undertaking the collectivization of agriculture and in intensifying through the cooperatives their efforts to increase agricultural production, was that both the proportions and the absolute amounts of grain and technical crops passing through state trading and processing channels must expand to support the industrialization program. It is clear, therefore, that the progress made in agriculture in 1956 is an important step toward realization of a better balanced program for economic development. The results in 1956 were not satisfactory to the planners in many respects, and it remains to be seen whether the outcome of increased production and state control of output will exceed in magnitude the effects of the state program of forced procurement of grain and technical crops that began in November 1953. There are indications that difficulties in implementing the plan through the cooperatives possibly may affect adversely the realization of production goals.

The proposals of Chou En-lai under the Second Five Year Plan provide that total capital investment for the years 1958-62 is to be about twice that of the First Five Year Plan -- about $36 billion.

* Converted at the exchange rate of 2.45 yuan equal to US $1.00. Unless otherwise specified, all dollar values in this report are in terms of US dollars.

Of this amount, investment in industrial capital construction will account for 60 percent; in railroad transport, 13 percent; in agriculture, forestry, and water conservancy, 10 percent; and in miscellaneous activities, about 17 percent. Within the category of industrial investment the producer goods industry is to receive about seven times as much as consumer goods industries, thus continuing the same proportions as in the First Five Year Plan.

Current receipts and major expenditures in the planned 1956 budget are substantially higher than in 1955. The increase in expenditures is such that no revenue will be available for carryover into 1957. The largest increase in expenditures is an increment of 5.5 billion yuan in investment in capital construction designed to achieve roughly one-third of the program for capital construction under the First Five Year Plan. These expenditures for fixed investment account for a larger proportion of the funds allocated to economic construction than in previous years and probably account for the rise of 2.3 billion yuan in bank loans in contrast with budget allocations of working capital to industry and commerce. The ability of the banking system to meet the over-all loan increase of 5 billion yuan in 1956 is questionable in view of the apparent lack of a budget surplus and of any specific allocation of new funds to the banking system. The estimated shortage of bank credit is believed to be part of a generally tightening financial situation in Communist China, which may become serious in 1957 in the light of the serious flood damage of 1956. The planned increase in current receipts in 1956 may be traced almost completely to anticipated profits of state industry.

The chief characteristic of the final 1955 budget was underfulfillment. On the revenue side this underfulfillment was attributed to the effects of the flood damage in 1954 on industrial taxes and on state commercial profits. Underfulfillment of expenditures was a result of the austerity program in industrial construction, especially in light industry. The patterns of expenditure and revenue in 1955 and 1956 show no substantial changes, although profits of state enterprises are now the primary source of revenue. Heavy industry accounted for half of construction funds, and defense spending for 20 to 25 percent of budget expenditure compared with 26 percent in 1952 and 1953. A projection of revenue through 1962 reveals no conflicts with announced plans to double investment. There is, however, little leeway for large increases in other types of spending, especially for defense expenditures, which are the chief competitors of the investment program for budget funds.

During the first 2 years of the program for industrialization, 1953 and 1954, substantial progress was made in developing the industrial output of Communist China, although the rate of increase did decline slightly. A sharp drop in the rate of increase was noted in 1955, especially in light and handicraft industries, reflecting in part the effects of the widespread floods of 1954. Industrial growth under the Second Five Year Plan probably will require greater investment and improvements in the rail transport system than were provided under the First Five Year Plan. During the next few years the program for industrialization probably will suffer some disruptions on account of recent events in the European Satellites and in the Middle East and of difficulties arising from the imbalance of the over-all Plan. Further increases in production in almost all industries are dependent upon increases in new productive capacity, much of which is to be supplied by the Soviet Bloc. According to the Second Five Year Plan, heavy industry is to produce more heavy and complicated equipment, with a number of iron and steel plants, automotive plants, power installations, and machinery-manufacturing plants scheduled for completion.

The trends in the modern industrial sector are shown in the following tabulation, which gives the production of major industries for 1952 and 1955 and that projected for 1957 and 1962:

	1952	1955	1957 (Last Year of First Five Year Plan)	1962 (Last Year of Second Five Year Plan)
Electric power (billion kilowatt-hours)	7.26	12.3	18.7	38.7
Coal (million metric tons)	64	93.6	113 to 120	190 to 210
Pig iron (thousand metric tons)	1,870	3,630	5,375	9,500
Crude steel (thousand metric tons)	1,350	2,853	4,900	11,100
Finished steel (thousand metric tons)	1,110	2,220	3,675	8,325
Crude oil (thousand metric tons)	430	980	1,600	5,500
Cement (thousand metric tons)	2,860	4,500	7,700	12,500 to 14,500
Machine tools (thousand units)	13.7	13.7	29	
Tungsten (thousand metric tons)	15.8	20.5	23.7	24.0
Copper (thousand metric tons)	8	12.9	13.6	15.5
Lead (thousand metric tons)	7	22.5	23.1	25
Zinc (thousand metric tons)	3.5	7.9	11	22
Antimony (thousand metric tons)	10	11	11	11
Tin (thousand metric tons)	9.8	16	18	29
Sulfuric acid (thousand metric tons)	146	252	290	400
Ammonium sulfate (thousand metric tons)	181	324	504	890
Cotton yarn (thousand metric tons)	656	720	1,016	1,452
Cotton fabric (million linear meters)	3,265	3,770	4,800	6,890

The Chinese Communists have been carrying out an ambitious rail construction program to improve the existing system and to service future planned demands, but the growth of rail capacity has not kept pace with the requirements of the growing industrial economy. Increased utilization of facilities and increases in freight car inventory have largely overcome some limitations, but traffic over several sections of line has been approaching or exceeding capacity. The transport system will continue to grow at a rapid rate, but increased investment is required if rail transport is to support the growth of the industrial sector during the next few years.

Rapid increases in retail trade took place from 1950 to 1954, averaging about 15 percent a year. The increase in 1955 above 1954, however, was only 2 percent. Production of light industry in 1955 was affected by shortages of cotton and tobacco, but retail sales were affected by certain other difficulties which will continue through 1962. The quality of many of the products of light industry has suffered because the planning system emphasized quantity rather than quality of production. The state trading system also hindered rather than helped trade in many commodities. Farm cash income will increase at a slower rate than total income, and the need for increasing the purchase of production materials for agriculture will limit cash expenditures for farm consumption. Prices are being raised for industrial crops and livestock to encourage production and to give the rural population a greater share of total cash income. As agricultural production will fall short of the targets of the Second Five Year Plan, this problem will continue to affect the level of trade in rural areas.

If the targets of the Second Five Year Plan for the basic food crops were fulfilled, consumption of grain would rise by almost 30 percent. It is likely, however, that production of basic food crops will show only half of this increase. The supply of basic food crops thus will increase twice as fast as the probable increase in population, but food consumption will not rise as rapidly as total consumption. As food is still the predominant concern of most of the population, the prospects are for continued rationing and other measures to limit demand for the basic food crops.

The population of Communist China is believed to be growing at a rate of 1.5 percent per year, with improvements in public health and welfare measures tending to decrease the mortality rate while the birth rate remains high. The total labor force still exceeds requirements in terms of numbers, but the training of skilled workers and

technicians continues to fall short of requirements for the program for industrialization, especially with respect to quality.

The gross national product of Communist China in 1955 was about 90 billion yuan. At the exchange rate for 1955 this is equivalent to about $36 billion. This figure lies in the lower part of a possible range extending from almost $90 billion for the value of Chinese output in US prices down to $25 billion in terms of the yuan value of US output. The gross national product of China is increasing at an average annual rate of 7 to 8 percent during the First Five Year Plan. This rate probably will continue through the period of the Second Five Year Plan. From 1952 to 1962, industry will nearly double its share of total output, increasing from 15 percent in 1952 to 27 percent in 1962. In 1962, industry will be nearly 4 times its 1952 level, an average annual rate of increase of nearly 15 percent. Agricultural output probably will increase at an average annual rate of about 3 percent for the 10-year period. Investment expenditures will rise in the 10-year period from less than one-sixth to about one-fourth of total output. Although consumption expenditures per capita probably will increase significantly, they will drop to less than 70 percent of total output.

The foreign trade of Communist China continues to increase rapidly. Total trade in 1955 was valued at about $4.5 billion, an increase of 30 percent above the 1954 level. If military deliveries under loan arrangements are excluded, trade is approximately in balance. The bulk of trade continues to be with the Soviet Bloc, with Free World trade comprising about 20 percent of the total. Since 1954, Communist China has extended trade in the Free World considerably. Trade with underdeveloped nations has especially been emphasized, and China presently has programs for economic aid in Cambodia and Nepal. Substantial economic aid has been given to North Korea and North Vietnam.

Foreign trade should continue to grow, but at a declining rate. Growth will be dependent upon the Chinese Communist capability to export but can be expected to reach about $4.8 billion by 1957 and more than $6 billion by 1962.

I. Introduction.

The "high tide of socialist transformation" of agriculture, industry, and commerce and the speedup of production which were decreed by the leadership of the Chinese Communist Party in the latter half of 1955 have profoundly changed the structural organization of the Chinese economy and the trend of economic development in Communist China during 1956. The accelerated socialization has been utilized by the regime to bring under state control and allocation more of the human and material resources of the country in order to expand production and bolster investment in industry. At the same time, the feverish speedup in production has similarly been used to hasten the program for industrialization under the First and Second Five Year Plans (1953-57 and 1958-62).

A chain of circumstances led to the series of shock decisions taken by Mao Tze-tung and the Central Committee of the Chinese Communist Party in the latter half of 1955. The floods in 1954 had reduced the available amounts of grain and industrial crops, so that in 1955 the output of light industry was seriously cut back and state revenues were reduced below expectations. A food shortage in southern China, which required the release of state grain reserves for relief purposes in the spring of 1955, was followed by bumper harvest yields throughout China. The difficulties encountered in 1954 by the Party cadres in procuring adequate grain and industrial crops for the planned allocations of the state and in organizing the peasants in cooperatives were largely removed by the bumper crop in 1955. At the same time, the reduced revenues of 1955 had necessitated a severe economy drive and cutbacks in planned investment and construction. Failure to attune to the economy program the scheduled rates of production in the construction materials and steel industries left the leaders with temporary surpluses which they sought to export to improve their trading position. In addition, the scheduled arrivals of Soviet Bloc industrial equipment ordered in earlier years were expected to be larger in 1956 and 1957 than in any previous year, necessitating substantial increases in investment allocations. The Second Five Year Plan, if it were to follow the Soviet model of doubling industrial output achieved under the First Five Year Plan, would necessitate doubling investment and therefore would require substantial increases in state revenues, which are largely derived from marketed grain and industrial crops.

It is the purpose of this report to review and analyze the economic development of Communist China under the First Five Year Plan in the light of all available information, and to assess (1) the impact on the economy of the various planning decisions made by the Peiping regime, including the doubling of the rate of investment in relation to the projected 50-percent increase in national income and a possible rise in per capita consumption, and (2) the prospects for realizing the goals of the Second Five Year Plan.

II. Significant Developments in Economic Planning and Administration.

A. Changes in Scope and Direction of Economic Planning.

The principal economic planning measures of the Chinese Communist government have been sensitive indicators of the progress which the Chinese Communist Party leaders think they have made in eliminating what the leaders themselves call the "basic contradiction" between the existing backward small peasant economy and the state-controlled economy of modern industry. The measures effected under the forced procurement of agricultural crops beginning in November 1953, and those envisaged under the First and Second Five Year Plans, have made it clear that the Chinese Communist leaders are concentrating what they consider to be the utmost of Chinese efforts and resources toward the goal of establishing China as an advanced industrial power. The Party line has been as "hard" as the leadership thought it could be in respect to extracting the maximum in investment resources from agriculture and light industry for the rapid development of heavy industry and as "soft" as the leaders thought it had to be in developing consumer industries in order to offer material incentives to workers and peasants to strive for increased production. The time finally came in 1955 when the projected rates of investment and growth for heavy industry required substantially increased allocations of investment resources from agriculture. It was clear that these requirements could be obtained only by extending close state control over the entire agricultural sector and by attaining substantially increased agricultural production. The only alternative was a falling off in the rate of growth of industry.

The extension of state controls over agriculture -- equivalent in the Communist rationale to socialization -- was a calculated risk requiring the deputizing of millions of poorly qualified cadres to posts of authority to direct the reorganization of land patterns and the intensification and improvement of cultivation practices on a mass scale. The risk was calculated, too, in terms of yielding increased income for the majority of the participating peasants, which would offset their losses in surrendering control of their own labor time and return from land. Where the peasants' distributive rights in their output ordinarily left only enough or little more than enough to tide them over to the next harvest -- that is, among the peasants classified as "poor" and "lower middle," who constituted the vast majority, and among those who had only recently improved their status, the "new middle" peasants -- there was every reason, in the view of the Party leaders, to believe that the immense reorganizational effort of the

first year of massive cooperativization would succeed in attaining slight improvement of production or reduction of flood losses which would be sufficient to provide increases both in peasants' retained shares and in marketed portions of agricultural output. This calculation was based on detailed results of average and bumper crop years, which proved that the peasants tended to retain a more or less constant absolute amount of their crop yields for home consumption whereas the marketed portions in good years mounted more than proportionately to the total crop. The much-used cliché of "saving an ounce of grain per day per person for the state" had real meaning with reference to the total farm population, each ounce thus saved amounting to nearly one-half million tons per year. The marketed portions of crops varied by 10 or 15 percent between average and good crop years. Only in the areas of normally large export surpluses of grain, where more of the peasants were classed as "upper middle" or "rich," would the regime expect the peasants to refuse to surrender their distributive rights in harvested crops and to undertake intensified cooperative efforts in return for an uncertain promise of an increased individual share in total output. The "upper middle" and "rich" peasants in the areas of export surpluses constituted only about 10 percent of total peasant households and were mainly localized in a few provinces.

The acceptance by the Central Committee of the Communist Party of the calculated risks of enforcing rapid collectivization of agriculture on a mass scale involved mainly the preparation of general directives which could be understood and implemented by cadres untrained in farm cooperative work or in agricultural techniques and which would serve to instill in the masses of peasants the motive of joint participation in the communal effort to improve over-all productivity and to advance their common lot and the purposes of the state. The regulations for cooperatives and the 12-Year Program for Agricultural Development set forth the aims and the terms for pooling individual labor and productive assets in phrases that appealed to popular understanding. Hundreds of national, provincial, and local conferences of workers and farmers and an intensive propaganda campaign through all the mass media were undertaken to stimulate patriotic enthusiasm for the effort and to overcome the traditional insularity of the individual peasant household. The mass organizational effort carried over into the detailed program of the 12-Year Program, utilizing the prescribed annual labor of the farm households -- 250 workdays for men and 120 for women -- to carry out local projects in irrigation, flood control, fertilizer accumulation, and enclosing the small individual plots in large collective fields. The scheduling of cooperative organizational work and local

projects for the cooperative members required adroit management to fit the necessary pattern of farm productive and sideline activity. The successive directives of the Central Committee demonstrated the central planners' recognition of this necessity, although in some cases too late to make up losses of subsidiary and handicraft production.

The Second Five Year Plan incorporates the expectations of the Central Committee as to the results of increased agricultural production and the necessary coordination of agricultural development with the investment requirements for the industrial goals. The agricultural goals probably still reflect some of the inflated optimism that was used in the 12-Year Program to elicit general acceptance of collectivization and intensified cooperative efforts, but in the view of the planners the impetus to be gained from immediate improvements in agricultural production might go far toward providing additional investment resources for agriculture which could render their Second Five Year Plan goals for agriculture more practical of realization. The investment requirements for industry are considerably less than would be obtained by full realization of the Second Five Year Plan's agricultural goals.

The extension of detailed economic planning and supervision to the agricultural sector of the Chinese economy, which is envisaged in the socialization program, the 12-Year Program, and the Second Five Year Plan, brings China's largest economic sector under central control as to allocation of investment resources and output. This represents a considerable increase in resources under central control, as well as in central directive responsibility and cadre supervision, and it will probably result in improved aggregative statistics of agriculture. It has already brought about an intensification of effort on a mass scale to increase agricultural output. For the regime, it constitutes a means (1) of assuring the realization of their industrial investment goals, (2) of providing more consumer goods as material incentives for workers and peasants, and (3) of possibly increasing agricultural investment.

B. Extension of Economic Controls.

1. Organizational Structure.

During 1956 the proliferation of the centralized economic control structure of Communist China continued, culminating in the creation in May 1956 of 10 new ministries, 2 commissions, and

2 specialized bureaus. The present central government is composed of the State Council, 8 staff offices, 7 commissions, 41 ministries, and 24 specialized bureaus. The number of ministries has more than doubled since the Communist regime began in 1949.

a. Central Planning.

Following the lead of the USSR in this field, China in May 1956 removed the function of annual planning from the State Planning Commission and assigned it to the new National Economic Commission. The State Planning Commission now concentrates on Five Year Plans. 1/* Before the division, the State Planning Commission from 1952 to 1956 increased its departments from 16 to 24 in order to handle the increasingly complex problems of planning the growth of the economy. 2/

A National Technological Commission was also created in May 1956 to engage in long-range planning for the improvement of industrial technology. Like a similar agency created earlier in the USSR, this commission is charged with selecting and promoting new techniques, formulating Five Year Plans, coordinating long-range technological developments, and insuring consistent technological developments throughout the industrial structure. 3/

b. Central Statistical Control.

The State Statistical Bureau, also attached to the State Council, is responsible for compilation and analysis of statistical data. 4/ The Director is also Vice-Chairman of the State Planning Commission. The 5 present deputy directors were previously regional government officials (2 from East China and 1 from Central-South, Southwest, and Northeast,** respectively) and thus have close knowledge of regional problems.

The Bureau is responsible for establishing systems and forms for use in all statistical reporting. The internal organization, methods, and terminology of the Bureau closely follow those of the Central Statistical Directorate in the USSR. 5/ In addition to the Central Bureau, there are statistical units within the provinces, municipalities, and hsiens (counties), operating under the general supervision of the Central Bureau. The central industrial ministries and commissions also have statistical sections. During 1956 the poor quality and inaccuracy of some statistical

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reporting continued to concern the authorities. One persistent cause is the shortage of trained statistical personnel on the lower levels. 6/

c. Industrial Ministries.

There are now 16 ministries concerned with control of industrial production and extraction processes. In addition to the previously existing Ministries of Light Industry, First and Second Machine Industries, Textile Industry, Agriculture, Forestry, Coal Industry, Electric Power Industry, and Petroleum, 7 new ministries were created in May 1956. 7/ The Ministry of Heavy Industry was abolished, and 3 of its former "control bureaus" were transformed into ministries in order to give more specialized attention to the chemical industry, the building materials industry, the iron and steel industry, and the nonferrous metals industry. The last two were combined under a Ministry of Metallurgical Industry. Ministerial specialization has also occurred in the electrical equipment industry, now supervised nationally by the Ministry of Power Equipment, which will apparently administer the manufacture of electrical and medical equipment. 8/

Two new ministries were created to promote the development of certain industrial sectors: the Ministry of Timber Industry, which took over some of the functions of the Ministry of Forestry, and the Ministry of Marine Products, which administers some functions formerly under the Ministry of Agriculture. The 2 new ministries control the processing, shipping, and sale of related products.

d. Other Economic Ministries.

Three other economic ministries were also established in May 1956. The Ministry of Land Reclamation controls state-operated farms (formerly under the Ministry of Agriculture) and directs the migration of people to carry out reclamation work. 9/

The establishment of two new ministries -- the Ministry of City Construction and the Ministry of City Services -- extends the influence of the central government in urban areas. 10/ Services and operations which were formerly controlled locally will now be administered by the central government. Thus the Ministry of City Construction will be responsible for the planning and design of city construction and

public utilities, including the problem of planning the construction of entire cities in the western areas of the country. The specific responsibility of the Ministry of City Services remains unclear.

The two ministries which had controlled all local state, public-private, private, and cooperative industries were also abolished in the May 1956 reorganization. These were the Third Ministry of Machine Building, which supervised machine building and electrical companies, and the Ministry of Local Industry. Enterprises formerly under these ministries will, depending upon the type of operation, be controlled by "special corporations" organized by the appropriate industrial ministry. 11/ The virtual elimination of private industrial enterprises through socialist transformation and their inclusion under separate industrial ministries further extends and simplifies centralized control of the manufacturing process in China. Similarly, control of local food enterprises was vested in the new Ministry of Food Industry.

2. Economic Control Organization.

Elements of local flexibility in meeting local problems will probably be added to the economic control mechanism of China. A concurrent strengthening of organs of administrative supervision has also been noted, however, indicating that the trend to a high degree of centralized economic control will continue.

a. Elements of Local Flexibility.

With reference to the degree of centralization there are, in general, two categories of ministries. 12/ The ministries of the first type are highly centralized. Each has an elaborate vertical structure with field offices throughout the country; even the lowest level is supervised by Peiping and has no responsibility to the local government. This group includes the Ministries of Metallurgical Industry, Chemical Industry, Building Materials Industry, Railroads, Higher Education, First and Second Ministries of Machine Building, National Construction, Communications, Posts and Telecommunications, Foreign Affairs, Geology, and Light Industry.

The second type of ministry of the central government does not have field offices as such but controls operations through counterpart departments which are nominally responsible to local state organs. That this local responsibility is more apparent than real is

illustrated in the example of the Ministry of Finance, where no accountant in a local-level organ can be appointed, dismissed, or transferred without the consent of his superior in the accounting administrative system. It is probable that primacy of authority of other central organs is maintained in other local organs in much the same fashion.

Although policy making is highly centralized in these areas, the lack of clear differentiation of authority between central and local organs, as well as the lack of administrative flexibility at local levels, leads to many problems. This is implicit, for example, in Chou En-lai's announcement on 30 June 1956 of a plan for division and definition of authority between the central and local governments with reference to planning, capital construction, and finance and political and legal affairs.* This plan is presently under consideration and is to be implemented provisionally in 1957. 13/

Further clarification of the degree of local control under consideration was provided by Liu Shao-chi in September 1956 14/:

> As regards a good deal of the work of the State, such as agriculture, small and medium industries, local transport, local commerce, primary and secondary education, local health services, local finance and so forth, the central authority should only put forward general principles and policies and map out general plans, while the actual work should be referred to the local authorities to make arrangements for carrying it out in a manner suitable to a particular place and a particular time involved.

With respect to financial administration, the Minister of Finance in his budget message to the National Peoples Congress on 15 June made the following statement 15/:

> It is planned to appropriately expand the authority of various localities in financial administration and in the expedient use of funds, so as to enable local authorities to control, within the limitations stipulated by the budget, their income and expenditures according to local conditions ... .

* This list also included "enterprises" and "organizations," probably referring to business enterprises and government agencies.

The limiting of authority, by measures of this type, to those local economic organs whose successful operation is affected by local conditions and the absence of the implication that general decentralization is envisaged indicates that only a minor increase in local authority is contemplated.

b. Extension of the Activities of the Ministry of Supervision.

More details on the activities of the Ministry of Supervision as an instrument of central control were revealed in 1956. This ministry is an organ of administrative supervision and, unlike other supervisory organs which can only present indictments for action through the peoples courts, has the power to render administrative punishment. 16/

The Ministry appears to have vertical organization with supervisory committees at every level of government administration. In addition to permanent duties, supervisory organs point out and are often given specific objectives for investigation and supervision. During 1956, organs of the Ministry were active in inspection and supervision of the agricultural cooperation movement in rural areas, the conditions of both flood prevention works and population control in potential flood areas, the formulation and execution of supply plans for food and daily necessities, and the execution of the price policy toward subsidiary agricultural products. 17/

During the first 6 months of 1956 the Ministry also conducted, in conjunction with the Ministry of Food, "keypoint" examination of food departments in their storage, transport, and supply work, with particular emphasis upon storage work and storage facilities. 18/

A number of examples of the results of inspections by supervisory organs in 1955 were made public in February 1956. The Ministry noted that the supervisory organ in the textile industry had decided to reduce the circulation and special funds of 41 production units by about 25 percent. Further, inspection of the railroad and communications ministries resulted in a total deduction of 37 million yuan from the operational funds of these departments. 19/ These auditing activities in the textile and communications industries may signify a formal assumption of the auditing function of the Ministry of Finance similar to that noted in the Ministry of Railroads in 1954. 20/ No further substantiation, however, is available.

An illustration of another type of control function was shown by the activities of supervisory organs in Shansi and 8 other provinces, where 716,500 tons of grain were claimed to have been saved from deterioration by their inspection work. 21/

The most publicized action of the Ministry of Supervision in 1956 was its work in July on the Mukden Transformer Factory case. The Ministry and the Supervisory Committee of the Central Committee of the Party conducted a joint investigation of the case, and their joint report noted that a struggle between leading Party cadres in the administration of the factory had resulted in serious losses to production, shipment of defective products, falsification of records, and "failure to seriously learn Soviet advanced experience by declining to carry out the correct suggestion of the Soviet experts." In addition, a serious attitude of "rightist indifference" existed among the leading groups of the factory. 22/ The immediate results were the expulsion from the Party of the secretary of the Party committee in the plant and the director of organization of the plant committee and the administrative demotion of the plant director and one other functionary. 23/ The appearance in August of a change in the organizational form of the Ministry of Supervision and a strengthening of its work on the lower levels is probably a second result of the case. 24/

These measures will probably mean both an increase in the number of peoples' supervisory committees over the 4,000 noted in November 1954 and an increase in the number of correspondents over the 78,196 observed in May of 1954. 25/ As a spur to the activities of these "correspondents," it was also emphasized that "supervisory correspondents or corresponding teams with excellent achievements must be extolled or rewarded." 26/

The institution of a rewards system for what has been essentially a network of unpaid informers and the expansion of the activities of this ministry into various fields indicates that the strengthening of the existing mechanism of administrative control over the organs of government continues. This will help to insure control of both ideological attitudes and execution of policies to the top levels of the regime.

3. Socialization of Agriculture, Industry, and Commerce.

The socialization of the economy of Communist China, accelerated in late 1955 by the personal intervention of Mao Tze-tung, has

resulted in almost total elimination of the private enterprise sector of the economy. Direct state control of agriculture, industry, and wholesale trade is virtually complete. Direct state control of retail trade and rural handicraft production is less apparent; however, indirect control by the state in these fields has greatly narrowed the sphere of operation of private interests.

a. Socialization of Agriculture.

Chinese Communist progress in the socialization of agriculture has been so rapid since July 1955 that the regime itself has not been able accurately to describe it. Three of the five stages of development of a socialist agriculture appear to have been realized with the organization of 91.7 percent of the total peasant households in China into approximately 992,000 semisocialist and higher level agricultural producer cooperatives. The fourth stage, the transformation of semisocialist cooperatives into higher level cooperatives (collectives) in which the ownership of the land and means of production by the collective replaces that of the individual, will probably be 90 percent complete by spring 1957. The fifth stage, technical reform of agriculture or mechanization, is supposed to be completed in 1972 or 1977 (Fourth or Fifth Five Year Plan).

The figures given in the following discussion are average figures and tend to obscure regional unevenness in the progress of socialization. For example, in the extent of formation of agricultural cooperatives, Hunan Province, with 14 percent of total households, and Szechwan Province, with 3.8 percent of households, are well under the national average of 68.1 percent. 27/ Underaverage figures such as these are assumed to be balanced by overaverage progress in other provinces, particularly those of northern China. It is felt that the lag in collectivization in these two provinces is probably the result of a number of factors. First, both produce approximately 18 percent of the total food crop production, and strong measures for collectivization might jeopardize the harvest. Second, neither province is a marginal area with a substantial class of poor peasants. The chief instrument of Communist rural policy has been the poor peasant class, and the lack of numerical strength of this class may have inhibited the progress of collectivization. Third, both provinces are within the newly liberated area. A general observation of the success of Communist rural policies indicates that those policies have been most successful in those areas which they have held longest. Fourth, both provinces have a double crop season. The timing of cooperativization has been correlated with the off-season in most areas. Thus the progress of collectivization in these areas would be limited to two short off-seasons rather than one long one and would accordingly be somewhat slower.

The First Five Year Plan stipulated the organization of one-third of the peasant households in China into approximately 1.3 million semisocialist cooperatives by 1957. This goal, announced in early July 1955, was rendered obsolete by Mao Tze-tung in his report of 31 July 1955. In this speech Mao stated his view that the formation of 1.3 million cooperatives by the spring of 1956 was a better target and that basic completion could be achieved by 1960. 28/

By the end of September, provincial Communist committee targets reflected Mao's goals. During October the pace of cooperativization was again speeded up by the decision of the Central Committee of the Communist Party. Basic completion (70 to 80 percent of all peasant households in cooperatives) was set for the spring of 1957 and total completion for the spring of 1958. This advanced Mao's goals by almost 2 full years. By November 1955 the figure set by Mao as a goal for spring 1956 -- 1.3 million cooperatives -- had been achieved.

A primary factor in the decision for the speedup in excess of Mao's target appears to have been the knowledge that the harvest prospects for 1955 were good. A measure which reflected the confidence of the leadership in a satisfactory harvest was the Draft Model Regulations for Agricultural Producer Cooperatives, published on 10 November 1955. Beyond serving as the organizational basis for the cooperatives, these regulations clearly pointed out that there was another stage of cooperativization ahead. 29/

Through December the movement increased in tempo. The number of cooperatives ceased to be a true indicator of the pace of cooperativization. The number of households in cooperatives became the more valid figure as the average size of a cooperative jumped from 25 to well over 100 households. This increase in organized households meant that the physical size of the cooperative increased, which was considered a prerequisite for movement into higher stage producer cooperatives, or collectives.

In December, two northern provinces of China, Hopei and Heilungkiang, came out with plans to start organizing higher stage cooperatives in the spring of 1957. On 26 January the Draft 12-Year National Program for Agriculture was published, stipulating that the goal of organizing approximately 85 percent of the peasant households into elementary or semisocialist cooperatives should be attained in 1956. 30/ Furthermore, areas which had already set up higher stage cooperatives by the beginning date of the 12-Year Plan were to complete

the higher stage by 1957. Those areas which did not have a higher stage cooperative in operation were required to create at least one collective (of more than 100 households) to serve as an example and were given the target year of 1958 to complete the basic work of organizing collectives. This implied that by 1958 approximately 85 percent of all the peasant households in China would be in collectives.

This 12-Year Plan which blueprinted the total mobilization of the agricultural population to achieve increased agricultural production contained stipulations for a 250-day workyear for males and a 120-day workyear for females. The conditions prescribed for elementary cooperatives to go forward to the collective stage were as follows 31/:

> The step must be the voluntary desire of the cooperative members, the cooperative must have strong enough leadership, and more than 90 percent of its members must be able to derive higher incomes after the change.

Thus any dissatisfaction felt by the peasant at his loss of land rights and control was to be offset by a prospect of increased income.

Figures announced in May indicated that, at the end of March, 90 percent of the total households had been organized into 1.08 million agricultural producer cooperatives. Of these households, 52 percent were in higher level cooperatives. 32/ At the same time, Teng Tzu-hui announced that the building, merging, and changeover of cooperatives to collectives had stopped because of spring sowing, and the movement shifted to consolidation and development of existing cooperatives.

Although the creation of new cooperatives ceased, consolidation and changeover did not. In June the total number of cooperatives dropped almost 90,000 -- to 992,000. The percentage of the total households in cooperatives, however, increased to 91 percent. Of these households, 68.1 percent were in collectives. 33/ (See Table 1.*)

* Table 1 follows on p. 23.

Table 1

Communist China: Development of Agricultural Producer Cooperatives and Collectives
December 1955-June 1956

	Number of Agricultural Producer Cooperatives (Million)	Total Households in Agricultural Producer Cooperatives a/ (Percent)	Agricultural Producer Cooperatives Households in Collectives b/ (Percent)
December 1955	1.90	63.0	6.7
January 1956	N.A.	78.0	25.0
March 1956	1.08	90.0	52.0
June 1956	0.992	91.7	68.1

a. Based on 120 million total households.
b. The term collectives is used for higher level agricultural producer cooperatives.

Whereas the progress of cooperativization was extremely rapid and generally satisfactory to the Communist leaders, some fairly serious side effects became apparent. Sideline or subsidiary production, which the peasantry would normally engage in during the winter season, appears to have been neglected. Insufficient production in subsidiary occupations decreased the income of the peasants and lowered the amount of raw materials available for some light industries and the export trade.

On 3 April the Central Committee of the Communist Party and the State Council issued a directive on "Careful and Frugal Practices in the Operation of Agricultural Producer Cooperatives" which pointed up some of the problems that had arisen in the previous 6 months. 34/ It suggested that too much of the resources of the cooperatives was being wasted on such nonproductive construction as cultural and educational facilities. The directive stipulated that cooperatives established after 1954 should avoid undertaking basic construction projects and concentrate on agricultural production.

Emphasis on socialization of handicraft workers was also affecting operation of the agricultural producer cooperatives. Some localities, in organizing handicraft workers into handicraft cooperatives, had forbidden them to join agricultural producer cooperatives. Further, some of the agricultural cooperatives had been forbidden to produce bricks, tile, and plaster for their own use. Rigid attempts to differentiate between handicraft producers and agricultural producers in the countryside had evidently caused a drop in the efficiency and production of both groups.

This criticism was more strongly repeated at the National Peoples Congress in June, as well as criticism of certain cadres who had been forcing peasants into cooperatives. Although there were a number of overzealous cadres whose efforts to overfulfill their quotas had resulted in uneconomical and impractical measures in the rural areas, the general results of cooperativization were satisfactory. Teng Tzu-hui stated at the Congress that another upsurge in cooperativization could be expected in the winter of 1956-57 which would reduce the over-all number of cooperatives but would expand their membership. 35/

On 30 June 1956 the Congress adopted the "Model Regulations for Higher Agricultural Producer Cooperatives" which were to serve as the charters for the collectives. 36/ These regulations were much like the earlier regulations except that income to cooperative

members became predicated solely on the amount of labor they accomplished. Solutions for many of the weaknesses which had been apparent in the earlier phases of the movement, however, were included. The principle of increased income to collective members was basic in these regulations, and provisos for allowing tools and facilities for sideline production to stay in the peasants' hands were also stipulated.

More important, limits were set on the public expenditures of money. Production fees were to be kept within 15 to 20 percent of annual income. Administrative salaries should not exceed 2 percent of annual income, and reserve and welfare funds were not to exceed 10 percent. This presumably would mean that the annual production dividend to members would be 60 to 70 percent.

One other measure also seemed to ease the situation in sideline production created during the winter of 1955-56. In July the State Council, in conjunction with the Ministries of Food and Commerce and the Peoples Bank, announced a plan for advanced purchase of 17.5 million hogs, with payments in the form of grain and cash. 37/ This measure was aimed both at remedying the drop in hog production in 1955-56 and at stimulating the general level of production.

At the Eighth Congress of the Communist Party in September 1956, the main theme, reflected in almost every speech, was the basic importance of agriculture. The announcement that the bourgeois-democratic revolution had been finished pointed to the fact that socialist transformation had been basically completed with the organization of cooperatives. The main problem remaining, according to the resolution of the Congress, was the modernization and elevation of the basically backward productive forces -- that is, the agricultural economy, to support and complement advanced socialist industrialization. 38/

In retrospect, it appears that the Communist leaders are extremely shrewd in their estimates of how strongly they can enforce their will on the Chinese peasants. Basic to the speedup of 1955 was the fact that 1955 was a comparatively good harvest year. If, as seems probable, 1956 was a good harvest year, it is expected that some semblance of an increase of income to most of the members of the collectives will be achieved. In that event, full collectivization of the remaining peasant households would probably be enforced.

The fifth and last stage of this socialization is the technical reform of agriculture. The regime is not likely to make spectacular gains in this field in the immediate future because of

equipment production limitations and of the relatively low priority assigned to production of agricultural implements. The present task appears to be the consolidation of these drastic changes in the countryside and continued emphasis upon raising the productivity of the land. The agricultural producer collectives will remain the chief mechanism for mobilizing human labor to achieve this increased production.

b. Socialization of Industry.

On 29 October 1955, Mao Tze-tung met with the leading figures of the All-China Federation of Industry and Commerce. The meeting marked the beginning of an increase in the tempo of socialization of industry and commerce which lasted through February 1956. The drive for formation of joint state-private enterprises by whole trades, rather than on an individual basis, that had begun in August 1955 was given great stimulus by this meeting. By the end of January 1956, virtually all private industrial enterprise had been transformed into joint state-private enterprise.

Implicit in the transformation of private industry was a move to reform the modes of operation by merger, relocation, and introduction of the methods of operation of state-operated industry. Measures to be undertaken by this transformation included inventorying of stocks and estimation of the assets of the enterprises in order to determine the value of shares on which dividends would be paid to the former private owners. In similar fashion the transformation envisaged changes in management, working hours, and wage systems.

In February it appeared that the regime was not prepared for such speedy development. On 8 February the State Council published two directives -- one on enterprise inventories and the other on postponing further Socialist transformation for 6 months. 39/ The first directive stated that the standard for assessment would be set equivalent to the conditions and value of machinery and plant facilities in the state-operated industries.

The second directive implied that much of the change was in name only, because, in postponing the further transformation for 6 months, the original owners were to continue to be responsible for the management of their enterprises and no changes were to be made in their personnel, working hours, and wage systems. The state, however, continued to accept applications for conversion from private operation to joint operation.

As most of the operations of private enterprises had previously been indirectly controlled by the state through state loans, orders, and control of raw material allocations, the net change in status does not appear to have been great. Nevertheless, the shift is tabulated in Table 2, where ownership of industrial output, excluding handicraft, for the years 1952-56 is shown.

Table 2

Communist China: Ownership of Industrial Output
(Excluding Handicrafts)
1952-56

Percent

	1952	1953	1954	1955	1956
State-operated	50	54.0	59.0	63	63.8
Cooperatives	3	3.5	3.8	5	4.7
Joint state-private	5	5.7	12.3	16	31.1
Private	42	36.8	24.9	16	0.4
Total	100	100.0	100.0	100	100.0

Both the bookkeeping and inspection involved in paying dividends on private stock in joint enterprises appear to have been burdensome, and in June 1956 Chen Yun announced that a flat 5-percent dividend would be paid regardless of type or size of operation. 40/ The diverse problems encountered in the drive to socialize industry and commerce were also clearly indicated by Chen. In particular, the small proprietors, whose plants were often part of their homes and to whom a dividend of 5 percent on the value of their holdings was not enough to live on, were evidently in bad straits. There also appeared to be problems in the working relationships between the representatives of the state and the former owners of the enterprises.

The shift of an increased number of industrial enterprises from private to joint operation was also a factor in the governmental reorganization of May 1956. Under the reorganization, the Ministry of Local Industry and the Third Ministry of Machine Industry were

abolished and more centralized control of the newly transformed industries was provided for by having each enterprise, in accordance with its type of operation, under a special corporation set up by the specific industrial ministries.

Efforts were made by leading spokesmen of the government to defend the regime's practice of maintaining former capitalists in management and technical positions after transformation. The rationale for their retention was the necessity for using their knowledge of business in the enterprises. The criticism that the 5-percent dividend payment was surplus value and thus constituted exploitation was admitted. This practice, however, is to be eliminated within the next few years. 41/

Handicraft producers were also the subject of the increased tempo of socialization of industry. In urban areas, handicraft producers appear to have been almost completely organized into handicraft cooperatives; supply marketing, and production cooperatives; or production teams by type of production and size of operation.

In rural areas the attempt to transform handicraft producers does not seem to have been notably successful. The rigid imposition of cooperativization of whole trades was not suited for rural areas as handicraft production is also an off-season activity of the peasantry. Again, many of the individuals and families who were primary producers of handicrafts were also engaged in secondary agricultural cultivation as well as rural buying and selling.

It is apparent that overzealous attempts to simplify and split the mixed rural organization of China into handicraft cooperative organizations, agricultural cooperatives, and trade cooperative organizations resulted in a slight decrease in handicraft production and a greater decline in quality and diversity. The State Council directive of February, postponing further socialization, stated 42/:

> As to those scattered and small-scale handicrafts for repair jobs and other personal services, the inherent factors of popular convenience and their quality should be preserved. Protection should be given to those special crafts with approved traditions. Those handicrafts which are suitable for individual management and the workers practicing these crafts who are reluctant to join cooperatives should continue to be managed individually.

The socialization of handicrafts is reflected in the 1956 budget. Of the total value of handicraft production, 72.5 percent is to be produced by handicraft cooperatives; supply, marketing, and production cooperatives; and production teams. The remaining 27.5 percent is to be produced by individual handicraftsmen. In 1955, individual handicraftsmen produced 85 percent and handicraft cooperatives, 15 percent, of the total value of handicraft production. 43/

The official statement at the Party Congress in September 1956 gave a total of 90 percent of "all who follow the calling of individual handicrafts" as being in producer cooperatives or supply and marketing cooperatives. 44/ Presumably the workers in individual handicrafts, accounting for 15 percent of the total of 1956 handicraft production, are rurally located and in some cases engaged in other occupations as well as handicrafts.

c. Socialization of Commerce.

Mao Tze-tung's push for socialization in October 1955 probably caused a considerable drop in the private part of retail trade as early as February 1956. The traditional conduct of wholesale and retail trade by a great number of private firms and private individuals rapidly gave way to the conduct of trade by types of collective organizations similar to those found in industry and agriculture. Wholesale trade in the most important goods is almost entirely in the hands of state trading companies. In 1950, private wholesale firms accounted for 76 percent of wholesale trade, but by early 1956 the share of private wholesale firms had declined to less than 5 percent of the total.

The state-operated retail network consists mainly of the department stores and other large stores in the cities. In the rural areas the formation of supply and marketing cooperatives was the main objective of the collectivization program for retail trade. These supply and marketing cooperatives, although nominally voluntary organizations of rural people grouped together under local leadership to promote more economic buying and selling, in reality constitute an important administrative device by which the state exercises increasing control over the economic livelihood of peasant families. The supply and marketing cooperatives now form the principal channel through which rural people buy consumer goods and farm tools and supplies.

The reorganization of 1955, in which the Ministry of Procurement of Agricultural Products was created to handle all purchase of major staple crops, limited the purchasing operations of the supply and marketing cooperatives to secondary agricultural products and handicraft products. The reduction of the number of cooperatives which resulted from the reorganization allowed the regime to reduce the number of administrators needed as well as disperse the agents of trade out into the countryside in order to improve peasant morale and production efficiency by bringing retail outlets closer to their places of work. 45/

By the beginning of 1956, most of the medium sized and small private retail enterprises in the large cities had been either eliminated, consolidated into larger units, or transformed into jointly operated public-private businesses. By April 1956, 1,680,000 private rural merchants and peddlers, more than 60 percent of the total, had been absorbed into the various forms of collective organization such as jointly operated public-private businesses and commission sales agencies. 46/

The problems that arose from the collectivization of domestic trade are similar to those arising from the collectivization of industry and agriculture. In the haste to form agricultural producer cooperatives and to increase the production of major agricultural commodities, many rural persons who had been merchants were transferred to agriculture and many peasants who were part-time merchants no longer devoted time to this sideline activity. In early 1956 there were criticisms in the official press of (1) the absence of conveniently located retail outlets in rural areas, (2) the lack of attention paid to the changing needs of the peasants, (3) the existence of large inventories of stale and unwanted stocks, and (4) the failure to comply with quality standards in the case of a great number of important consumer goods.

On 3 March the All-China Federation of Supply and Marketing Cooperatives, which had been the leading organ in stimulating transformation, issued a directive which brought transformation to a halt 47/:

> ... Special characteristics should be preserved and promoted, and generally, during the immediate coming months, no changes should be made to their original management and control methods, including the taking in of stocks, the pushing of sales, keeping of books, wages and ... forms of service.

Table 3 shows the participation of various elements in all retail trade. Table 4 shows participation of bona fide commercial organs -- that is, enterprises whose sole function is trading. Both tables are based on 1955 Plan fulfillment figures and 1956 budget report, and subsequent developments will require modifications of them.

Table 3

Communist China: Participation in All Retail Trade
1954-56

Percent

	1954	1955	1956 (Planned)
State-operated	19.5	27.0	60.5
Cooperatives	38.3	30.5	
Joint state-private	4.7	12.7	25.5
Private	37.5	29.8	8.9
Peasant			5.1
Total	100.0	100.0	100.0

Table 4

Communist China: Participation of Bona Fide Commercial Enterprises in Retail Trade
1954-56

Percent

	1954	1955	1956 (Planned)
State-operated	22.2	31.5	28.2
Cooperatives	45.7	35.8	31.9
Joint state-private	5.6	15.2	26.1
Private	26.4	17.4	13.6
Total	100.0	100.0	100.0

Chen Yun, speaking at the Eighth Party Congress in September, announced that a number of direct state controls over the marketing of some consumer goods would be relaxed. 48/ He estimated that commodities, constituting one-fourth of the value of total 1956

retail trade, would be traded on a free market. Whereas all grain, industrial crops, and important subsidiary agricultural crops would continue to be purchased by the state or by supply and marketing cooperatives as agent of the state, a part of the subsidiary agricultural products, which had been exclusively purchased by supply and marketing cooperatives, would be permitted to be competitively purchased, transported, and marketed by state-operated stores, cooperative stores, cooperative teams, and supply and marketing cooperatives. Free marketing by handicraft workers of their products would be restored. The quality of manufactured consumer goods was expected to improve as a result of the provision for removal of price fixing on goods of varying quality.

At least some Marxist criticism of the so-called free market has been noted, for both Chen, at the Congress, and Hsueh Muchiao, vice chairman of the State Planning Commission, have pointed out that this definitely is not a capitalist market. 49/

As of 3 November 1956, free markets were in operation in nine provinces -- Kwangtung, Fukien, Hupei, Shantung, Kiangsu, Szechwan, Kiangsi, Shensi, and Hopei. 50/ Initial indications are that a rise in prices of commodities traded, followed by an increase in supply and a price drop back to the price set in state stores, has resulted. 51/ This free market is a realistic return to the situation as it was before 1953. Attempts at extending complete control to all facets of economic life by the state during the drive for socialization appear to have been unsuccessful in this phase of the retail commercial process.

C. Budget System.

1. General.

A tighter financial situation in 1956 is suggested by the fact that total planned budget revenue available for current expenditure was to increase by a smaller percentage than any previous budget, and that it is insufficient to provide the surplus characteristic of Chinese Communist budgets since 1951.* Failure to achieve a budget surplus may have serious repercussions in view of the expanded bank credit program of 1956. Budget funds in the past have been the chief source of bank reserves and, with no increase apparent from this source in 1956, the planned expansion of credit of 4.5 billion yuan by non-inflationary means seems very difficult of achievement.

* See Figure 1, following p. 32.

50X1

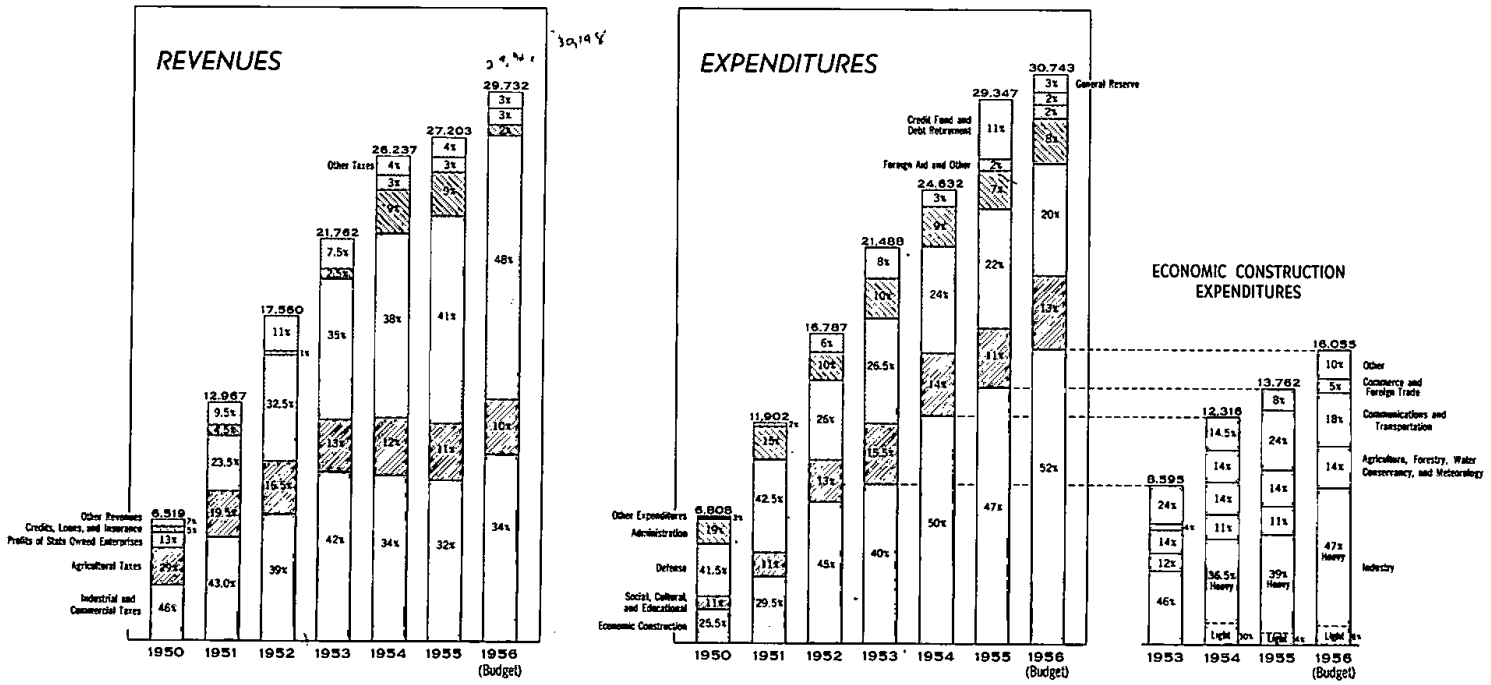
COMMUNIST CHINA

Figure 1

BUDGET REVENUES AND EXPENDITURES

1950-56

(Billions of Current Yuan)



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The undesirable method of achieving a surplus in the final 1956 accounts through underfulfillment of expenditure is a possibility. According to a statement at the Eighth Party Congress in September, the capital construction plan would be only 92 percent fulfilled, which, if exactly reflected in capital construction expenditures, would result in an expenditure underfulfillment of over 1 billion yuan. This could well be offset by cuts in planned receipts due to the 1956 flood and typhoon damage. Judging by the 1954 experience, however, the main impact on the budget of these natural disasters will come in 1957, when anticipated profits on commerce and indirect taxes will be affected.

2. Revenue.

a. Taxes.

Tax receipts, which constituted about 75 percent of current revenue in 1950, were budgeted at about 47 percent for 1956, being supplanted for the first time as the chief source of revenue by profits and depreciation reserves of state enterprises. Within the tax category, there has been a shift of even greater magnitude -- away from reliance on agricultural taxes and in favor of industrial and commercial taxes. Most of the latter are in the form of commodity or turnover taxes with incidence on the consumer, who in China for the most part is the peasant, thus maintaining agricultural income as the major source of tax revenue. Table 5* shows the budget revenue of Communist China in 1955 and 1956.

Almost all of the 1.2-billion-yuan rise in tax receipts in 1956 will be from industrial and commercial taxes, which will still fall short of the 1955 planned collections of such taxes. The significant underfulfillment of industrial and commercial tax revenue in 1955 was attributed to declines in important sectors of light industry output and to the lack of peasant purchasing power, both stemming from flood damage to crops in 1954. This explanation was rejected by a group of former private entrepreneurs who, in a statement to the Peoples Congress in June, said ineptness in socialized trade and failure to utilize experienced private personnel caused artificial shortages and underfulfillment of retail trade plans and consequent underfulfillment of commercial profits and taxes. 52/ Criticism of this sort was not without foundation, for the Chinese Communists recently adopted a series

* Table 5 follows on p. 34.

Table 5

Communist China: Budget Revenue
1955-56

Million Yuan

Budget Items	1955 (Planned)	1955 (Actual)	1956 (Planned)
Profits and depreciation reserves of state enterprises			
Industry	4,591	5,073	6,689
Commerce	3,709	3,320	4,095
Communications	N.A.	1,791	2,108
Agriculture and forestry	N.A.	532	632
Other	N.A.	478	604
Joint enterprises	N.A.	a/	200
Total	11,116	11,194	14,328
Taxes			
Agriculture	2,800	3,054	3,020
Industry and commerce	10,000	8,725	9,970
Customs duties and salt tax	981	966	990
Total	13,781	12,745	13,980
Credits, loans, and insurance			
Foreign loans	N.A.	1,657	142
Domestic bonds	600	704	600
Residual	1,712		0
Total	2,312	2,361	742

Table 5

Communist China: Budget Revenue
1955-56
(Continued)

Million Yuan

Budget Items	1955 (Planned)	1955 (Actual)	1956 (Planned)
Other	841	903	681
Total current receipts	28,050	27,203	29,732
Surplus carried over from previous year	3,143	3,155	1,011
Total revenue	31,193	30,358	30,743

a. The discrepancy between total profits and the sum of sector profits derived from the 1956 breakdown and announced increases has been eliminated by treating other profits as a residual. Alternatively, it may be that the state suffered a loss of 88 million yuan on its share of joint enterprises for which no profits were recorded for 1955.

of trade reform measures reminiscent of former freer trade practices, which were acknowledged to be directed at remedying defects of socialized trade.

The constant value of 1955 and 1956 agricultural taxes at 3 billion yuan is difficult to reconcile with the budget statement that grain tax collections were to increase from 19 million metric tons of processed grain in 1955 to 20.7 million tons in 1956. Central government grain collections were to remain at 17.25 million tons, but, because of increased authorizations of local surtaxes and levies, total collections were to go up. The possible explanation that local levies are not included in reported agricultural taxes is supported by budgets of previous years, wherein the changing value of grain taxes bears no relation

to the reported volume of grain collections. If local levies are not included, the reported value of agricultural taxes by no means reflects the true burden of the budget on peasants in Communist China.

b. Profits and Depreciation Reserves of State Enterprises.

Achievement of the profit target was the crucial goal in planned receipts for 1956. The absolute increase of 3.1 billion yuan was the largest profit increase ever planned or achieved in a Chinese Communist budget, and it not only matched the total increase in budget receipts of 2.5 billion but helped to offset the large decline in 1956 in revenue from foreign loans. The large rise was predicated on the fulfillment of many Five Year Plan production goals during 1956, any significant failure in which may entail curtailment of planned expenditures.

Feasibility of the profits target may be more easily analyzed because of inclusion within the latest budget report of the sector breakdown of state enterprise profits. Industry is the largest source, contributing about 46 percent of such receipts in 1955 and 1956. All sectors of the state economy expected to increase profits in 1956, but the absolute increase of 1.6 billion yuan from state industry was double that of any other sector. The planned increase in industrial profits was 31 percent, which was substantially greater than the planned 21-percent increase in gross value of state industrial output. An upward adjustment in industrial profit margins at the expense of the commercial markup was planned for 1956, however, and this could support at least a part of, if not the entire, differential. Any general underfulfillment of 1956 industrial production certainly will have repercussions on the optimistic industrial profits target.

The state's commercial profits arise primarily from its 90-percent share of wholesale trade and, within that trade, from profits on sales of basic agricultural commodities. The planned 21-percent increase in state commerce profits is probably largely dependent on the Chinese Communist thesis that the marketed proportion of crops and thus of goods available to the trade network will nearly double under agricultural producer cooperatives as compared with previous proportions marketed by individual peasants.

The planned 200-million-yuan return in 1956 on the state's share in joint enterprises was only part of its earnings from participation in the joint enterprises' 31-percent share of total industrial

output and 25-percent share of retail trade. Expenditures for capital construction and increased working capital of joint enterprises are to be financed outside the budget from profits, in contrast to the treatment accorded to state enterprises. Extension of this plan to state enterprises is to take place within the next few years when such enterprises will be allowed to retain a set proportion of profits for investment.

c. Credit, Loans, Insurance, and Other.

The conclusion in 1955 of a 2-year transfer of Soviet military equipment and supplies to Communist China was responsible for the drop in credit, loans, and insurance receipts from over 2 billion yuan to roughly 700 million yuan in 1956. The much-vaunted Soviet industrial credit contributed less than 1 percent of 1955 and 1956 receipts. Annual domestic bond sales of 600 million yuan continued in 1956.

Receipts, under the category other, in the past have been substantially higher than in 1955 and 1956 because of the previous inclusion in this category of nonrepetitive donations and confiscations. The more stable revenue elements of this category are believed to be administrative fees of budget-supported enterprises, such as school tuition fees and gross revenue of forced labor camps.

3. Expenditures.

All major categories of expenditure were to be increased in 1956 in response to the drive to fulfill the First Five Year Plan ahead of schedule, the speedup of socialization in the first quarter of 1956, and to make up for cuts in expenditure during the 1955 austerity program. Table 6* shows the budget expenditures in 1955, planned and actual, and in 1956. Although on the surface defense expenditures are an exception to this trend, over 1 billion yuan of 1955 expenditure simply reflects the value of transferred Soviet military equipment and, when this is disregarded, domestic expenditure on defense in 1956 shows an increase of 19 percent. The leveling off of 1956 total expenditures in relation to 1955 obscures the major category increases because of the listing within the 1955 budget of a 2.4-billion-yuan allocation to the banking system. It had been expected that any such increase in bank reserves would be determined by the year-end surplus, but achievement of the bank loan plan required the assignment of funds during that year. As pointed out above, such an allocation of reserves in 1956 was not possible unless planned expenditures were cut or revenues exceeded the plan.

* Table 6 follows on p. 38.

Table 6

Communist China: Budget Expenditures
1955-56

Million Yuan

Expenditure	1955 (Planned)	1955 (Actual)	1956 (Planned)
Economic Construction			
Industry			
Heavy	5,698	5,327	7,569
Light	690	524	975
Total	6,388	5,851	8,544
Agriculture, forestry, water conservancy, and meteorology	1,312	1,473	2,185
Communications and transport	2,146	1,911	2,896
Commerce, food, and foreign trade	2,845	3,355	857
Other a/	1,498	1,127	1,573
Total	14,189	13,762	16,055
Unaccounted		45	
Social, cultural, and educational	3,851	3,189	3,916
Administration	2,242	2,154	2,420
Defense	7,193	6,500	6,112
Other			
General reserve	1,017		790
Credit, loans, insurance, and other	1,245		
Bank credit funds	b/	2,418	
Local revolving funds	b/	201	
Foreign and domestic debt	622	662	760
Foreign aid and miscellaneous		456	670
Total	2,262	3,742	2,220

Table 6

Communist China: Budget Expenditures
1955-56
(Continued)

Million Yuan

Expenditure	1955 (Planned)	1955 (Actual)	1956 (Planned)
Grand Total	29,737	29,347	30,723
Capital construction c/	9,592	8,631	14,091

a. Identified in 1955 plan budget as stockpiling, municipal construction, and joint enterprises. The latter category is now financed outside the budget.
b. Expenditures similar to these were made at the end of 1954 from accumulated surplus allocations to the banking system in that year totaling 2.6 billion yuan and to local revolving funds of 307 million yuan.
c. Most of these expenditures are under economic construction with a minor share under social, cultural, and educational, and administration.

In 1956 the largest increase in expenditure was for capital construction. The planned rise of 62 percent in this category was to carry out over one-third of the First Five Year Plan construction program in 1956. As most of the expenditure for fixed assets comes under economic construction, the 2.3-billion-yuan rise in this category is not unexpected.

The priority of heavy industry in investment spending continued in 1956 with the allocation of an even larger proportion of economic construction funds. The 86-percent increase in light industry investment was elicited by the need for more consumer goods to match the planned increases in average wages and, more important, by the attraction of the quick return on capital so invested.

Increased spending on communications and transport and on agriculture, forestry, and water conservancy was sufficient to overfulfill in 1956 the Five Year Plan investment targets for these sectors. Agricultural investment has been largely for flood control and irrigation, and the stepping up of such construction work in 1956 was facilitated by the regimentation of agricultural labor through the now almost universal agricultural producer cooperatives.

The decline in expenditure on commerce, food, and foreign trade of over 2 billion yuan brings 1956 spending to roughly the same level as in 1954. Spending in 1955 exceeded the annual average for this category because it included a huge allocation of working capital to the new Ministry of Agricultural Procurement. This Ministry took over from the supply and marketing cooperatives responsibility for buying basic agricultural commodities under the forced sales program. A change in financing accompanied the shift in responsibility because, in the place of bank loans of working capital to the cooperatives, a permanent grant of budget funds was made to the Ministry.

Social, cultural, and educational projects bore the brunt of the economy program in 1955 when only 82 percent of planned spending took place. The curtailed expenditures apparently were to be carried out in 1956, especially as regards school construction. Enrollment plans for higher education and secondary schools have been revised upward, necessitating at least a meeting if not an expansion of construction plans. Considerable expenditure on school facilities was to be financed outside the budget, for example, by agricultural producer cooperatives' sponsoring primary schools and, in addition, by increasing revenue from tuition fees. Some overfulfillment, or a shifting of funds within the category, was expected in 1956 because farm relief already was over the planned expenditure of 200 million yuan.

The Chinese Communists have had notable success in holding down administrative expenditures, and the increase in this category planned for 1956 just about covered the planned wage increase. Measures underlying the stability of administrative expenditures have been primarily at the expense of government workers, who have been cut from the payroll, transferred to local units, suffered money wage cuts, and lost a variety of fringe benefits.

The allocation to Defense of Soviet credit and transfers of Soviet military equipment in China to the Chinese Communists constitutes about 20 percent of total defense expenditures. The only other comment on defense spending in the official budget report was the explanation

that underfulfillment of the budget plan for defense expenditures was due to the conscientious handling of funds by the Defense Department, which permitted reductions in planned expenditure. There has been little change in the level of military personnel in the last few years, although there have been pay increases. For the most part, however, increases in defense spending over the years represent new equipment, supplies, and defense construction.

Expenditures on foreign and domestic debt in 1955 and 1956 almost equaled current receipts from borrowing. In 1956 the state was to repay about 100 million yuan on the 1954 bonds, 50 million yuan on the 1955 bonds, 146 million yuan on the 1950 Soviet loan, and the remainder of 460 million yuan on the Soviet loans of 1954 and 1955.

The foreign aid mentioned in the budget covers commitments to North Vietnam, North Korea, Cambodia, Mongolia, and Nepal, arranged in order of magnitude of China's 1956 expenditures for foreign aid. The aid agreements run for 2 to 5 years from 1955 and, assuming equal annual drawings, aid expenditure in 1956 will total 355 million yuan. The remaining 315 million yuan of miscellaneous expenditure in 1956 covers tax collection expenses and other unknown items.

4. Projected Budgets, 1957-62.

Receipts and expenditures have been estimated for the last year of the First Five Year Plan and for the period of the Second Five Year Plan. The methodology for estimating the 1957 budget is given in the footnotes to Tables 7 and 8. Table 7* shows budget expenditures projected for 1957, 1960, and 1962. Table 8** shows budget revenue projected for 1957, 1960, and 1962. Information for projecting revenue and expenditure through 1962 was drawn mainly from speeches by Liu Shao-chi and Chou En-lai at the Eighth Party Congress. Certain desirable relations of economic aggregates were defined; for example, budget expenditure should constitute roughly 30 percent of national income. Within the budget, twice as much should be spent on capital construction as in the First Five Year Plan; defense and administration expenditures should be cut from 30 to 20 percent of spending; and economic construction and social, cultural, and educational expenditures should be raised from 56 percent to 60 to 70 percent of spending.***

* Table 7 follows on p. 42.
** Table 8 follows on p. 43.
*** Continued on p. 44.

Table 7

Communist China: Projected Budget Expenditures
1957, 1960, and 1962

Billion Yuan

	1957	1960	1962
Economic construction	17.4 a/	22.8	30.4
Social, cultural, and educational	4.2 b/	5.2	6.0
Administration	2.4 c/	2.8	3.1
Defense	6.1 d/	6.7	7.3
Other	2.5 e/	4.9	5.2
Total	32.6	42.4	52.0
Surplus	-0.3	0.9	0.9
Capital construction f/	11.6 g/	17.1 h/	23.5

a. The remainder of 11.6 billion yuan to be expended under the First Five Year Plan plus increased capital construction expenditures of 4.3 billion yuan (less 200 million yuan attributed to educational construction), adjusted for an average relationship of economic construction yuan to capital construction yuan of 1.4 to 1.
b. Estimate.
c. Estimate based on announced policy not to increase the number of administrative employees and the regular underfulfillment of planned expenditures, which in 1956 were 2.42 billion yuan.
d. Estimate based on continution of spending at same level as in 1956 with no Soviet military credits.
e. Estimate based on greater domestic debt retirement, as a greater proportion of bonds will be due and shipments under aid agreements negotiated in 1956 will be at a higher level. The reserve funds also are expected to increase in line with their announcements that this is necessary for greater flexibility and dealing with emergencies.
f. Most capital construction expenditures as listed under economic construction with a minor share under social, cultural, and educational, and administration.
g. Balance of 7.3 billion yuan left to be spent under the First Five Year Plan plus 4.3 billion yuan representing announced plans to overfulfill capital construction spending by 10 percent.

Table 7

Communist China: Projected Budget Expenditures
1957, 1960, and 1962
(Continued)

h. Capital construction expenditures for each year have been estimated within the framework of the plan to double First Five Year Plan capital construction to a total of 85.5 billion yuan. The allocations to specific years are based on the proportions achieved in the First Five Year Plan or planned as for 1957, that is, 15 percent in 1953. For other years, estimated expenditures are: 1958, 12.8 billion yuan; 1959, 14.5 billion yuan; and 1961, 20.5 billion yuan.

Table 8

Communist China: Projected Budget Revenue
1957, 1960, and 1962

Million Yuan

	1957	1960	1962
Profits and depreciation reserves of state enterprises			
Industry	7,492	11,037	14,649
Commerce	4,406	5,692	6,675
Transportation and communications	2,365	3,331	4,068
Other	1,480	2,309	3,116
Total	15,743	22,369	28,508
Taxes			
Agriculture	3,182	3,618	3,971
Industrial and commercial	10,790	14,312	16,988
Other	1,089	1,327	1,495
Total	15,061	19,257	22,454
Credit, loans, insurance, and other	1,475	1,645	1,900
Total	32,279	43,271	52,862

Derived total expenditures for the Second Five Year Plan period were assumed to increase at a regular yearly rate of about 10 percent. The desired expenditure proportions were assumed to be achieved gradually through 1962. For example, economic construction and social, cultural, and educational spending would constitute 66 percent of 1960 expenditures and 70 percent of 1962 expenditures.

Distribution of funds within the consolidated classifications was made in relation to past budgets. The use of roughly 140 million yuan per year in administrative spending was assumed to continue through the Second Plan period. Defense expenditures were derived on a residual basis. The estimated rise in such spending errs only on the conservative side in view of the military modernization program and the planned buildup of more costly naval and air units. Analogy to the First Five Year Plan spending also was used in breaking out social, cultural, and educational expenditures, leaving economic construction expenditures as a residual. Other expenditures are equal to the unaccounted-for proportions of state expenditures, for example, 10 percent in 1962.

Estimated revenues are sufficient to finance the projected expenditures. Tax revenue was estimated from the base year 1953, when major revisions were made in Chinese Communist tax regulations. Turnover taxes and commodity taxes were moved by estimated gross value indexes for the relevant sectors. Income taxes and profits of state enterprises were estimated from value-added indexes and data on socialization. An implicit assumption as regards socialization was that the 1956 pattern would hold through 1962.

The category of credits, loans, insurance, and other was moved by certain assumptions as to domestic bond campaigns and foreign loans. By 1952 the annual bond target is estimated at 750 million yuan, an increase from the 600-million yuan flotations of the First Five Year Plan. Only a slight increase in the level of foreign loans is estimated from the 1955-56 rate of 140 million yuan per year to 200 million yuan by 1962. Other receipts are assumed to rise by about half the rate of other sources of revenue.

Projected revenues are sufficient to yield a budget surplus, although never one in excess of 1 billion yuan. Unless the banking system successfully develops private savings as a source of bank reserves, the budget surplus will not permit very great increases in annual loans.

D. Capital Construction Under the First and Second Five Year Plans (1953-62).*

1. First Five Year Plan.

Judging from a series of many Chinese Communist announcements since 1953 it is apparent that, as stated by Chou En-lai on 18 September 1956, the Peiping government expects that the First Five Year Plan goals for capital construction will have been exceeded by 10 percent by the end of 1957. Percentages of completion of annual plans of capital construction for previous years are as follows: 1953, 89.6 percent; 1954, 92.4 percent; and 1955, 94 percent. Figures given by Liu Shao-ch'i at the Eighth Party Congress imply that the Chinese Communists foresee 92-percent completion of the 1956 Plan. This degree of plan fulfillment would put the Chinese Communists in a position to overfulfill the First Five Year Plan in 1957. If, for example, only 87 percent of the 1956 Plan were completed, or 28.5 percent of the entire Five Year Plan instead of 33 percent as the 1956 Plan contemplated, and if an equal volume of work were done in 1957, the entire Five Year Plan would have been exceeded by 10 percent by the end of 1957.

Because a reduction of unknown proportions was made in the 1956 capital construction program it is possible to describe and discuss the program only as it stood before September 1956 when the reduction was announced at the Eighth Party Congress. The extent of the cutback is not known with respect to any sector. Although there appears to have been a general reduction in construction allocations, several sectors have received increases and, in any case, the overall reduction is believed to be no more than 8 percent. 53/

Industrial investment by the industrial departments has taken up 52.7 percent of total capital (or basic) construction expenditures from 1953 through 1955, and if the 1956 Plan is considered, industrial investment will have amounted to 52.5 percent of planned expenditures for the 4-year period (see Table 9**). Investment in

* As the Chinese Communists allocate capital construction funds and announce the volume of capital construction work completed in terms of current prices, this discussion is also in terms of current prices. It is not believed that price changes have been sufficient to lead to more than minor errors in estimating the yuan value of total capital construction.

** P. 54, below.

transportation, posts, and telecommunications has absorbed 19.7 percent of total basic construction expenditures from 1953 through 1955.* Expenditure for capital construction projects in culture, education, and health constituted 8.7 percent of capital construction expenditures from 1953 through 1955, amounting in those 3 years to 66 percent of the amount originally planned in this category under the First Five Year Plan. Agricultural investment by the government under the Five Year Plan is estimated to have been 6.9 percent** of total basic construction investment from 1953 through 1955, and if the 1956 Plan is considered, agricultural investment will have been 7.2 percent of the total planned capital construction expenditures from 1953 through 1956. In addition to Five Year Plan investment funds, agricultural loans are estimated to have amounted to 1.0 billion yuan in 1955, and to amount to 3.6 billion yuan in 1956. The increase in new loans in 1956 over 1955 is to be 2.6 billion yuan as compared with an increase of only 300 million yuan in 1955 over 1954.

a. Investment by Industrial Departments.

Industrial investment by the industrial departments as a percentage of yearly total investment has increased each year of the Five Year Plan, from 49.3 percent in 1953 to 52.7 percent in 1954 and to 55.2 percent in 1955 (see Table 11***). The latter was the year of the great economy movement, when nonindustrial investment was cut back -- building construction, for example, being reduced from 47 million square meters in 1954 to 30 million square meters in 1955. In the 1956 Plan it is estimated that industry dropped to approximately 52.1 percent of total 1956 planned basic

* The Chinese Communists report posts and telecommunications investment with transportation for these years. Posts and telecommunications investment on the central government level is less than 1 percent of total First Five Year Plan investment as planned.

** The term agricultural investment covers investment in agriculture, forestry, and water conservancy and is used for the sake of brevity. Investment for the lumber industry, which is defined by the Chinese Communists as an industrial investment, is included in their allocation for agriculture, forestry, and water conservancy but is deducted for comparative purposes here.

*** P. 57, below.

construction expenditures. Investment by the industrial departments will have more than doubled since 1953 if 1956 Plans were carried out. If the 1956 Plans were fulfilled by 90 percent, investment by the industrial departments will have more than doubled since 1953 (see Table 12*).

The order or priority within industry ranks machine building first, followed by steel, power, coal, and oil. Textiles, chemicals, nonferrous metals, and the construction materials industry are at a lower level, and various light industries are at the bottom of the list in order of volume of investment.

During 1956 the proportional distribution of investment funds between heavy (or producer goods) industry and light industry has been a subject of much discussion among the Chinese Communist planners. On 18 June 1956, Li Fu-chun, Chairman of the National Planning Commission, stated that, whereas the First Five Year Plan originally stated that heavy industry was to receive 88.8 percent and light industry 11.2 percent of industrial investment funds, in 1956 and 1957 the proportional distribution was to be changed in favor of light industry, to 87.5 percent and 12.5 percent. The new ratio presumably was to apply to the total Five Year Plan investment. This represents only a small change in the ratio of heavy to light industry investment -- from about 8 to 1 to about 7 to 1.

Local industrial investment -- to serve local needs -- was allocated 4.4 percent of the total basic construction funds. About half of the local industry investment will be for light industry.

b. Transportation.

Transportation, posts, and telecommunications were second only to government industry in volume of yearly capital construction investment through 1956. Within the investment for transportation, posts, and telecommunications, the investment for railroads has been the greatest and has shown the greatest increase. If the 1956 railroad basic construction plan was fulfilled by 90 percent, the total expenditure in 1956 will have been 2.5 times that of 1953. No other sector has had such an increase over 1953 expenditure. Investment for railroads as a percentage of yearly total basic

* P. 58, below.

construction expenditure has been as follows: 1953, 11.1 percent; 1954, 13.8 percent; 1955, 14.5 percent; and 1956, 14.4 percent (Plan).

Investment in highways, waterways, civil air transport, and posts and telecommunications, as a percentage of yearly total basic construction expenditure, has been as follows: 1953, 6.4 percent; 1954, 7.0 percent; and 1955, 5.8 percent.

c. Agriculture, Forestry, and Water Conservancy.

Agricultural investment (excluding investment in the lumber industry) as a percentage of yearly total investment under the First Five Year Plan has been as follows: 1953, 10.0 percent; 1954, 4.8 percent; 1955, 6.4 percent; and 1956, 7.6 percent (estimate). The estimated share for 1956 was somewhat higher than agriculture's share from 1953 through 1955 (6.9 percent).

The preponderant share of agricultural investment, both by the Ministry of Agriculture and by the Ministry of Conservancy, goes to water conservancy construction. There have been announcements of great increases in irrigated areas since October 1955 and of plans for enormous yearly increases in irrigated areas. It is believed that most of these newly announced increases have been and are to continue to be the result of peasant activity and that they take the form of small-scale, simple irrigation construction. It is believed that these activities are financed through the savings of agricultural producer cooperatives and through agricultural loans to cooperatives and to individual peasants. The great development of agricultural producer cooperatives from mid-1955 to mid-1956 and the increase of loans coincide with the great increase in small-scale conservancy construction. In 1955, total agricultural loans are estimated to have amounted to 1.0 billion yuan and in 1956 were to amount to 3.6 billion yuan.

2. Second Five Year Plan.

From the Second Five Year Plan proposals presented at the Eighth Party Congress it is apparent that capital construction expenditure is planned to be about twice the size of that under the First Five Year program, or about 85 billion yuan (see Table 13*). Industrial capital construction is to constitute 60 percent of the

* P. 59, below.

total expenditure, or about 51 billion yuan, compared with 58.2 percent of total planned expenditure under the First Five Year Plan. The proportion allocated for transportation in the Second Five Year Plan was not announced, but with respect to railroad investment a reasonable assumption can be based on the statement that 8,000 to 9,000 kilometers of new rail lines would be built. As this is twice the mileage of track originally planned under the First Five Year Plan, it is assumed that railroad investment under the Second Five Year Plan will be approximately double the planned expenditure under the First Five Year Plan, or approximately 11 billion yuan -- 13 percent of the total planned investment expenditure. Investment in agriculture is to constitute 10 percent of the total, or about 8.5 billion yuan, as compared with 7.6 percent of the total under the First Five Year Plan. (The 7.6 percent includes the lumber industry investment of about 789 million yuan.) If it is assumed that lumber needs will double with construction and that the industry should have at least the same proportionate share of total investment which it had under the First Five Year Plan, then about 1.8 percent of Second Five Year Plan investment or 1.5 billion yuan will be allocated for the lumber industry. It is further assumed that the 8.5 billion yuan allocated to agriculture includes the lumber industry investment as is the case under the First Five Year Plan. If the estimated 1.5 billion yuan for the lumber industry is subtracted from the 8.5 billion yuan, the agricultural investment under the Second Five Year Plan constitutes 8.2 percent of the total. Agricultural investment (excluding the lumber industry) under the First Five Year Plan was set at 5.8 percent of the total.

Investment in all other elements of the Second Five Year Plan makes up 18.5 percent of the total. Under the First Five Year Plan this residual was 22.7 percent.

These proportions show the relative importance which the Chinese Communists attach to the various phases of the investment program. Industry still far outranks all else and has a slightly larger proportionate share than under the First Five Year Plan. Rail transportation is still in second place with a very substantial proportion of the total. Agriculture has gained somewhat. The miscellaneous category has diminished.

When the absolute amounts allocated under the First and Second Five Year Plans are compared, it is seen that industry and rail transport in the Second Five Year Plan are twice the volume of planned expenditure in the First; agricultural expenditures are 2.8 times greater. The residual category is 1.6 times its planned

magnitude in the First Five Year Plan. These relationships are shown in Table 13.

a. Industry.

The principal feature of capital construction investment in industry under the Second Five Year Plan is that it is twice the magnitude of investment in the First Five Year Plan. Investment in most industries will at least double -- that is, most of them will retain approximately the same percentage shares which they had during the First Five Year Plan. Oil investment, now that geological surveys of the past few years are reported to have uncovered large resources, will probably be increased to between three and four times the estimated 1.1-billion-yuan investment planned under the First Five Year Plan. It is expected that among heavy industries, machine building (engineering industries), steel, and power will continue to have highest priority and oil, coal, and chemicals follow in priority. Investment in nonferrous metals should continue to be proportionately small.

Emphasis will continue to be upon heavy industry. In view of the production targets proposed for the Second Five Year Plan, the investments in heavy and light industry should retain approximately the same ratio to each other as during the First Five Year Plan. If any appreciable downward modification were made in the Second Five Year Plan, the heavy industry proportion would receive the greater cut.

(1) Chemical Fertilizer Investment.

Special mention should be made of capital construction investment in chemical fertilizer because of its importance in the agricultural program of the Second Five Year Plan. It is believed that unless construction not presently known to be planned is undertaken during the Second Five Year Plan, the magnitude of investment outlay will not be great and that in any case it will not have more than a small proportionate share of total industrial capital construction investment.

The two types of fertilizer of chief interest to the Chinese Communists are nitrogen fertilizer (ammonium sulfate and ammonium nitrate) and phosphate fertilizer. These two will make up the great bulk of the 3.2 million metric tons which the Chinese Communists say they will produce in 1962. Of this total it is estimated

that one-third will be made up of nitrogen fertilizer. The remaining two-thirds will be phosphate fertilizer. The only known construction or expansion of nitrogen plants is that which is included in the First Five Year Plan -- this includes 3 new plants and 2 existing plants being reconstructed.

Another source of increased ammonium sulfate production will be the expansion of byproduct production of ammonium sulfate by the expanding steel industry. This type of production will be a considerable share of the total production.

It is believed that approximately two-thirds (2.0 to 2.2 million metric tons) of the 1962 chemical fertilizer goal will be made up of phosphate fertilizers. A great deal of construction is taking place in 1956 and 1957 in phosphate fertilizer, and probably a large capacity will come into being during 1956 and 1957. This new capacity is not included in the 1957 production goal of 578,000-metric tons of chemical fertilizer. The 578,000-metric-ton goal includes 548,000 tons of nitrate fertilizer, leaving only 30,000 tons of phosphates. It is certain, however, that much more phosphate production will be possible by 1957.

(2) Industry on the East China Coast.

There was discussion among the Chinese Communist planners during 1956 of a reemphasis on development of industry in established coastal industrial areas, especially in Shanghai and Tientsin. The reemphasis is pointed toward developing existing plant facilities and increasing the utilization rate of existing capacity, which can be accomplished by rationalizations and by slight expansions of existing plants. The coastal industry development program has been urged as a means of saving investment funds; of increasing state income through quick returns on small investment; of developing consumer goods production; of increasing, with relatively small expense, heavy industry production for support of new industrial bases in the interior; and of fostering the development of a body of experienced industrial personnel for employment in the new industrial centers.

b. Agriculture, Forestry, and Water Conservancy.

Capital construction investment in agriculture under both First and Second Five Year Plans is made up of several elements: water conservancy, building and expansion of chemical fertilizer

plants (the allocations for which are included in industrial investment), land reclamation, setting up of state farms, mechanization of agricultural operations, improvement of agricultural techniques through the setting up of agricultural technique stations, and the like. The principal elements are irrigation, the fertilizer program, and reclamation. Mechanization of operations will play a very minor role through 1962.

Investment funds spent for capital construction in agriculture consist of those which are spent by the Ministries of Agriculture, of Water Conservancy, and of Forestry; those which are spent by industrial ministries for chemical fertilizer plants; and those spent by peasants through savings of agricultural cooperatives and through state agricultural loans.

(1) Irrigation by the State and by Peasants.

Most of the state's capital construction investment funds for agriculture are spent upon water conservancy. The major part of the conservancy program consists of the building of very large water control projects which serve for flood control, erosion prevention, development of hydroelectric power, and navigation. The effect upon agriculture of state investment is threefold. In the first place, as the flood menace is decreased over the years, calamities will decrease in number and severity and there will be fewer bad crop years caused by floods. Second, water resources will be made available for irrigation purposes in areas hitherto lacking in sufficient water. Third, the state can undertake irrigation projects which are too big to be handled by agricultural producer cooperatives and by individual peasants.

The first 5-year program provided for an increase of irrigated land by 4.8* million hectares. Apparently most of this increase (probably 75 percent) is to be achieved by the peasants in cooperatives through savings of cooperatives and through loans by the state. The Ministry of Water Conservancy reported in July 1955 that of the 68-million-mou** increase in irrigated land in 1950-54, the peasants were responsible for irrigating 50 million mou through the carrying out of

* It is believed that this figure more accurately reflects net increase in irrigated land than do the figures given in the spring of 1956, when enormous increases were reported to have taken place and to be planned for 1956, 1957, and subsequent years.
** One mou is equal to approximately one-sixth of an acre.

small-scale irrigation projects. The state was responsible for the irrigation of the remaining 18 million mou or 25 percent of the total. 54/ It is probable that the state's part in adding to the irrigated area will remain at about this level through 1962.

(2) Effectiveness of Chinese Communist Agricultural Investment.

An examination of the Chinese Communist agricultural investment program (both state and peasant) indicates that it will probably enable the Chinese, barring natural calamities, to produce 80 million metric tons of rice and 1.745 million metric tons of cotton in 1957 and 95 million metric tons of rice and 2.4 million tons of cotton in 1962. This judgment is based upon gauging the effectiveness of the two principal elements of the investment program -- irrigation and increased application of fertilizers. The addition of newly reclaimed land to the cultivated area is important but not so important as the other two elements.

Table 9* shows capital construction expenditure in 1953-56 under the First Five Year Plan. Table 10** shows capital construction expenditures, 1953-56, by central government industrial ministries under the First Five Year Plan. Table 11*** shows basic construction expenditures, by sector, in 1953-56. Table 12**** shows an index of basic construction expenditures, by sector, in 1953-56. Table 13/ shows a comparison of major expenditures under the First and Second Five Year Plans.//

* Table 9 follows on p. 54.
** Table 10 follows on p. 56.
*** Table 11 follows on p. 57.
**** Table 12 follows on p. 58.
/ Table 13 follows on p. 59.
// Continued on p. 61.

Table 9

Communist China: Value of Completed Capital Construction a/*
1953-56

Million Yuan

Departments	Total Planned Expenditures 1953-57	1953 Expenditures	1953 Percent of 5-Year Goal	1954 Expenditures	1954 Percent of 5-Year Goal	1955 Expenditures	1955 Percent of 5-Year Goal	1956 Plan b/ Expenditures	1956 Plan b/ Percent of 5-Year Goal
Industry c/									
Machine building	6,930	925 d/	13.3	1,117 d/	16.1	1,437 d/	20.7	1,983 e/	28.6
Fuel	6,790	868 d/	12.8	1,007 d/	14.8	1,366 d/	20.1	2,104 d/	31.0
Heavy industry f/	6,490	779 d/	12.0	935 d/	14.4	1,402 d/	21.6	1,935 d/	29.8
Textiles	1 160	173 d/	14.9	280 d/	24.1	240 d/	20.7	280 d/	24.1
Light industry	690	103 d/	14.9	167 d/	24.1	143 d/	20.7	167 d/	24.1
Construction and engineering	690	89 d/	12.9	1,110 d/	15.9	144 d/	20.8	202 d/	29.3
Geology	200	26 d/	12.8	30 d/	14.8	40 d/	20.1	62 d/	31.0
Local industry	1,900	245 d/	12.9	302 d/	15.9	395 d/	20.8	557 d/	29.3
Total g/	24,850	3,208 d/	12.9	3,948 d/	15.9	5,167 d/	20.8	7,290 d/	29.3
Transportation and posts and telecommunications h/									
Railroads	5,670	724 d/	12.8	1,035 d/	18.3	1,354 d/	23.9	2,013 d/	35.5
Communications (central and local government) i/	2,540	418 d/	16.5	523 d/	20.6	546 d/	21.5	811 d/	31.9
Total	8,210	1,142 d/	13.9	1,558 d/	19.0	1,900 d/	23.1	2,824 d/	34.4
Agriculture, forestry, and water conservancy k/									
Excluding lumber industry	2,471	652	26.4	363	14.7	601	24.3	1,063 d/	43.0
Lumber industry	789	95 d/	12.0	114 d/	14.4	175 d/	22.2	235 d/	29.8
Total	3,260	747 d/	22.9	477 d/	14.6	776 d/	23.8	1,298	39.8
Culture, education, and health l/	3,080	698 d/	22.7	701 d/	22.8	626 d/	20.3	N.A.	
Commerce, banking, and commodity stockpiling m/	1,280	389 d/	30.4	416 d/	32.5	341 d/	26.6	N.A.	
Municipal utilities n/	1,160	250	15.6	232	14.5	218	13.6	N.A.	
Other expenses o/	460	70 d/		81 d/		101 d/		151 d/	
Industrial expenditures not elsewhere listed p/		22 d/		26 d/		32 d/		48 d/	
Statistical discrepancy		-20		+59		+199			
Grand total	42,740	6,506	15.2	7,498	17.5	9,360 q/	21.9	14.000	32.8

* Footnotes for Table 9 follow on p. 55.

Table 9

Communist China: Value of Completed Capital Construction a/
1953-56
(Continued)

a. Value of completed investment is expressed in current prices. It is believed that in 1955 new criteria of value of completed investment were introduced, and that these new criteria resulted in higher totals of completion than would have resulted from continuance of the criteria used in 1953 and 1954. In 1955 the Chinese Communists probably started counting certain savings as completed investment. They may also have started to count partial completions in their totals. The new criteria resulted in a total value for 1955 which was over 1 billion yuan (or 2.7 percent of total expenditure planned under the First Five Year Plan) higher than would have been obtained under the criteria used in 1953 and 1954.
b. Based on the 1956 Plan before its reduction announced in September 1956.
c. 55/
d. Estimate.
e. Estimate. No plan announcements are available for 1956 machine building investment. It is assumed to increase in the same proportion as heavy industry.
f. This is a category used in the First Five Year Plan. It is not equivalent to the term heavy industry when that term is used in contrast to light industry.
g. The First Five Year Plan includes a sum of 1.77 billion yuan to be spent for industrial investment by nonindustrial ministries. Of this sum the Plan allocated 789 million yuan to the lumber industry under the Ministry of Forestry. The remaining 981 million yuan is distributed among various other nonindustrial ministries. The Five Year Plan allocates 24.85 billion yuan to investment by the industrial departments. The additional 1.77 billion yuan brings the grant total allocated to industry up to 26.62 billion. In Table 9 the sum of 1.77 billion is included in the sums listed for nonindustrial ministries and is not explicitly set forth except in the case of the 789 million planned for the lumber industry. The remaining 981 million yuan is included in the sums listed for nonindustrial departments and in the item Industrial Expenditures Not Elsewhere Listed. See Table 10 for a detailed breakdown of industrial expenditures.
h. 56/
i. Highways, waterways, civil air transport, and posts and telecommunications.
j. Total if it is assumed railroads have the same proportion of total transport investment as in 1955.
k. 57/
l. 58/
m. 59/
n. 60/
o. This is a category used in the First Five Year Plan.
p. These sums are among the industrial investments by nonindustrial ministries. They should be added to the yearly expenditures of certain of the nonindustrial ministries listed but the Plan does not specify their allocation. Therefore this table excludes the other sums.
q. Li Fu-chun, Vice Premier of the State Council and Chairman of the State Planning Commission, said on 18 June 1956 that in the first 3 years of the First Five Year Plan 54.6 percent of the work for the 5 years was completed.

Table 10

Communist China: Value of Completed Industrial Capital Construction a/.
1953-56

Departments	Total Planned Expenditures 1953-57	1953 Expenditures	1953 Percent of 5-Year Goal	1954 Expenditures	1954 Percent of 5-Year Goal	1955 Expenditures	1955 Percent of 5-Year Goal	1956 Plan b/ Expenditures	1956 Plan b/ Percent of 5-Year Goal
Machine building	6,930	925 c/	13.3	1,117 c/	16.1	1,437 c/	20.7	1,983 d/	28.6
Fuel industry									
Electric power	3,416 c/	393 c/	11.5	437 c/	12.8	642 c/	18.8	861 c/	25.2
Coal	2,292 c/	332 c/	14.5	399 c/	17.4	477 c	20.8	543 c/	23.7
Petroleum	1,082 c/	143 c/	13.2	171 c/	15.8	247 c/	22.8	700 c/	64.7
Total	6,790	868 c/	12.8	1,007 c/	14.8	1,366 c/	20.1	2,104 c/	31.0
Heavy industry									
Steel e/	4,292 c/	422 c/	9.8	504 c/	11.7	908 c/	23.3	N.A.	
Other f/	2,198 c/	357 c/		431 c/		404 c/		N.A.	
Total	6,490	779 c/	12.0	935 c/	14.4	1,402 c	21.6	1,935 c/	29.8
Textiles	1,160	173 c/	14.9	280 c/	24.1	240 c/	20.7	280 c/	24.1
Light industry	690	103 c/	14.9	167 c/	24.1	143 c/	20.7	167 c/	24.1
Construction and engineering	690	89 c/	12.9	110 c/	15.9	114 c/	20.8	202 c/	29.3
Geology	200	26 c/	12.8	30 c/	14.8	40 c/	20.1	62 c/	31.0
Local industry	1,900	245 c/	12.9	302 c/	15.9	395 c/	20.8	557 c/	29.3
Industrial investments by nonindustrial ministries g/									
Lumber industry	789	95 c/	12.0	114 c/	14.4	175 c/	22.2	235 c/	29.8
Other h/	981	136 c/		184 c/		217 c/		300 c/	
Total	1,770	231 c/		298 c/		392 c/		535 c/	
Grand total	26,620	3,439 c/	12.9	4,246 c/	16.0	5,559 c/	20.9	7,825 c/	29.4

a. See footnote a, Table 9.
b. Based on the 1956 Plan before its reduction announced in September 1956.
c. Estimate.
d. Estimate. No Plan announcements are available for 1956 machine building investment. It is assumed to increase in the same proportion as heavy industry.
e. 61/
f. Includes chemical, nonferrous metals, and construction materials industries.
g. This item brings together the various industrial investment sums allocated to the nonindustrial ministries. In Table 9, these sums are included in the total allocated to various nonindustrial ministries and in the item Industrial Expenditures Not Elsewhere Listed.
h. This item includes sums subtracted from the yearly totals given in Table 9 for various nonindustrial ministries and it includes also the item Industrial Expenditures Not Elsewhere Listed.

Table 11

Communist China: Value of Completed Capital Construction in Current Prices, by Sector 1953-56

Percent

Sector	1953	1954	1955	1956 Plan a/
Industry b/	49.3 c/	52.7 c/	55.2 c/	52.1 c/
Transportation and posts and telecommunications	17.6 c/	20.8 c/	20.3 c/	20.2 c/
Agriculture, forestry, and water conservancy (excluding lumber industry)	10.0	4.8	6.4	7.6 c/
Culture, education, and health	10.7 c/	9.3 c/	6.7 c/	N.A.
All others	12.4 c/	12.4 c/	11.4 c/	N.A.
Total	100.0	100.0	100.0	100.0

a. Based on the 1956 Plan before its reduction announced in September 1956.
b. The percentages are based on the industrial investment totals in Table 9 (total 1953-57 = 24.850 billion yuan) and do not include industrial investment of nonindustrial ministries.
c. Estimate.

Table 12

Communist China: Index of Expenditures for Completed Capital Construction in Current Prices, by Sector 1953-56

1953=100

Sector	1953	1954	1955	1956 Plan a/
Industry b/	100	123 c/	161 c/	227 c/
Transportation and posts and telecommunications	100	136 c/	166 c/	248 c/
Agriculture, forestry, and water conservancy (excluding lumber industry)	100	56	92	163 c/
Culture, education, and health	100	100 c/	90 c/	N.A.
Index of total	100	115	144	215

a. Based on the 1956 Plan before its reduction announced in September 1956.
b. The percentages are based on the industrial investment totals in Table 9 (total 1953-57 = 24.85 billion yuan) and do not include industrial investment of nonindustrial ministries.
c. Estimate.

Table 13

Communist China: Comparison of Major Expenditures Under the First and Second Five Year Plans
1953-62

Sector	Planned Expenditures, First Five Year Plan a/ (Billion Yuan)	Approximate Planned Expenditures, Second Five Year Plan (Billion Yuan)	Second Five Year Plan as a Percent of First Five Year Plan	Percent Under First Five Year Plan	Percent Under Second Five Year Plan
Industry	24.85	51.00	205	58.2	60.0
Railroads	5.67	11.30	200	13.3	13.3
Agriculture, forestry, and water conservancy	2.47 b/	7.00 b/	283	5.8 b/	8.2 b/
All others	9.75 c/	15.70 d/	161	22.7	18.5
Total	42.74	85.00	199	100.0	100.0

a. These are the figures as set forth in the Five Year Plan. They do not take account of possible overfulfillment or underfulfillment of plans.
b. Excludes lumber industry investment.
c. The principal elements are culture, education, and health; nonrail transportation; municipal utilities; and banking, commerce, and commodity stockpiling.
d. Largely the same as under the First Five Year Plan.

III. Population and Labor Force.

A. Population Trends.

The estimated growth pattern for the Chinese population over the last 25 years, with a projection to the year 1962, is shown in Table 14. The year-to-year figures for population were not separately estimated but were projected on the basis of assumed average annual rates of increase for much wider time spans -- 1930-49, 1950-52, 1953-56, and 1957-62. The basic assumption is that China's population has undergone sporadic growth over the past 25 years with considerable variation of annual rates of growth but that the paucity of information precludes any reconstruction of even approximate yearly changes. A growth rate of 0.3 percent per year was estimated for the period through 1949 from a review of social and economic conditions of this period, coupled with analogical reasoning based on the record of the Indian population.

Table 14

Estimated Growth of the Chinese Mainland Population
Selected Years, 1930-62

Million

Year (Midyear)	Population	Year (Midyear)	Population
1930	535	1954	589.6
1935	543	1955	596.7
1940	551	1956	603.9
1945	559	1957	611.1
1950	568	1958	620.3
1951	572	1959	629.6
1952	577	1960	639
1953	582.6	1961	648.6
		1962	658.3

Following the termination of widespread hostilities in 1949, some decline in mortality rates was experienced. Continuation of this decline requires control over famine and disease, and, whereas some progress is being made, the very magnitude of the task insures against easy or early success. Consequently, based on current information available from China and on evidence from the demographic history of similar populations, it seems likely that the mortality rate in China is now declining slowly and will continue this trend through 1962. The birth rate, on the other hand, is currently believed to be within the range of 40 to 50 per 1,000 population and is expected to maintain that high level through 1962. It is estimated that the annual rate of increase will rise to an average of approximately 1.5 percent over the period 1956-62, adding a net increase of about 10 million to the population each year.

The official growth rate of 2 percent which was first announced in connection with the 1953 census has been rejected chiefly on the grounds of too low mortality rates.

B. Labor Force.

1. Workers and Employees.

Workers and employees in the national economy are the largest component of the Chinese Communist labor force for which data have been made available on a continuing basis. This group numbered 18.5 million in 1955, or roughly 6 percent of the estimated labor force.* The labor force is largely composed of agricultural workers.

Although the composition of the worker and employee classification, as used in the 1955 State Statistical Report, was not spelled out, it is believed to be linked with other announcements on workers in departments of the nationalized economy and with the First Five Year Plan classification of workers and staff in economic departments. The latter was given as a subcategory of the 21 million workers and staff in the entire nation and constituted almost 80 percent of the whole category.

Total employment of workers and employees and distribution by form of ownership are shown in Table 15.**

50X1

** Table 15 follows on p. 63.

Table 15

Communist China: Workers and Employees Employed in Economic Enterprises
Selected Years, 1952-62

Million

Area of Employment	1952	1955	1957 Plan	1962 Plan a/
State, cooperative, and joint enterprise	6.3	12.2 a/	11.1	25.5
Private enterprise	10.4	5.3 a/	9.3	
Subtotal	16.7	17.5	20.4	25.5
Administrative	1.5	1.5 a/	1.6	1.6
Social, cultural, and educational	2.3	2.8 a/	2.7	4.0
Personal service	0.5	0.5 a/	0.5	0.6
Total	21.0	23.3	25.2	31.7

a. Estimate.

The greatest change has been from private to socialized employment at a rate well in excess of the First Five Year Plan target of a shift of about 1 million persons. Almost half of the First Five Year Plan goals for increases in over-all and economic department employment remain to be accomplished. Prospects of fulfilling these goals in the last 2 years of the Plan are good, especially in view of the speedup in production and construction which, even with increases in labor productivity, requires sizable additions to the labor force. Actual increases in 1956, if continued at the rate of the first half year, would fulfill half the remaining goal, leaving about the same increase necessary to complete the Plan in 1957.

The Second Five Year Plan includes an increase of 6 million to 7 million persons among workers and employees. In Table 15* the increase is shown as 6.5 million persons, with 5.1 million assumed to be new workers in the nationalized economy. The Second Five Year Plan goal represents an increase of 25 percent, which exceeds the planned 20-percent increase of the First Five Year Plan.

The Chinese Communists have had success in keeping administrative employment more or less constant. Increases in employment in 1953 and 1954 were reversed as part of the 1955 economy drive, especially at the central government level. The overfulfillment of the Five Year Plan goal for social, cultural, and educational employment was to be expected in view of overfulfillment of higher and middle school enrollment plans.

a. Sector Distribution of Workers and Employees in Economic Departments.

The distribution of workers and employees in economic departments in 1952 and 1955 is shown in Table 16.**

The big decline in private handicraft, transportation, and miscellaneous employment is because of exclusion in 1955 of certain handicraft employees from the worker classification and the transfer of such workers to other categories of employment, including agriculture. The 1952 and 1955 transportation figures are not completely comparable, as no private modern employment was included in the 1952 total, whereas

* P.63, above.
** Table 16 follows on p. 65.

Table 16

Communist China: Distribution of Workers and Employees of Economic Departments, by Sector 1952 and 1955

Thousand

Sector	1952	1955
Industry	5,405	6,603
Commerce	3,453	3,825
Posts, telecommunications, and transportation	797	1,550
Construction	1,021	2,300
Agriculture, forestry, and water conservancy	239	575
Finance	378	600
Private handicraft, transportation, and miscellaneous	5,485	3,047
Total	16,778	18,500

the 1955 figure includes former private highway and water transportation workers now in joint and state enterprises. The figures on construction employment may also lack comparability because the later figure includes all construction workers, whereas in 1952 only permanent building and installation workers were listed. The announced building and installation employment in 1955 was 1.8 million persons. The 2.3 million figure given in Table 16 reflects roughly the same relationship of building and construction employment to over-all construction employment as was shown in construction data for the nation and the Northeast region in 1953.

b. Industrial Distribution of Workers and Employees.

Absolute figures on industrial employment have been used in conjunction with announcements on increases in gross value of production and labor productivity to make the estimated industrial breakdown

of the labor force shown in Table 17. The largest percentage increases in the labor force have been in those sectors having top investment priority, such as engineering, heavy industry, electric power, and coal mining.

Table 17

Communist China: Distribution of Workers and Employees in Industry 1952 and 1955

Thousand

Industry	1952 a/	1955
Heavy	590	740 b/
Light	3,030	3,400 c/
Textiles	700	700 d/
Coal mining	460	790 e/
Engineering	315	580 f/
Weapons and ammunition manufacturing	150	120 g/
Electric power	110	200 h/
Petroleum	50	73 i/
Total	5,405	6,603

a. [redacted] Figures are based primarily on announcements. 50X1

b. Estimate derived from announced increases in labor productivity and gross value of output applied to announced 1954 heavy industry employment.

c. Estimate derived from assumption that gross value of output of food-processing workers per capita is typical of light industry workers, who produce the balance of 4 billion yuan in output.

d. Adjusted downward by 20,000 to reflect decreases in textile production in 1955. 64/

e. Estimate based on adjustment of announced figure on number of coal miners to include surface and managerial personnel.

f. Estimate based on announced production and labor productivity increases.

g. Estimate based on value added.

h. 65/

i. Residual.

2. Quality of the Labor Force.

The Chinese Communists are using foreign technical assistance, a strict allocation of available technicians, intensive on-the-job training programs, and a greatly expanded educational system to overcome the general shortage of skilled and technical manpower. One measure of this shortage is the admittedly inadequate but still relatively ambitious First Five Year Plan target of increasing both the number of specialists and the number of skilled workers by 1 million persons. Table 18 shows the sources of the new personnel.

Table 18

Communist China: Sources of Specialists and Skilled Workers
1953-57 a/

Source	Number
Higher education graduates	283,000
Secondary vocational graduates	888,300
Completion of study abroad	900
Training of workers abroad	22,300
Worker training b/	918,000

a. School years 1952/53 and 1956/57.
b. Ministry and on-the-job training.

a. Educational Training.

Competition between enterprises and educational institutions for qualified persons has been intense, with the latter seeming to have gained priority in 1956. Graduates of the secondary vocational schools who ordinarily would enter the labor force immediately were encouraged to sit for college entrance examinations. Five Year Plan enrollment targets for higher education have been revised upward, from 434,000 to 510,000 for 1957, and for secondary vocational enrollment have been surpassed in 1956, with a total of 801,000 students in contrast to a 1957 goal of 672,000.

This latter revision has elicited competition for personnel not only within industry but also within the educational system itself. The combined demands of secondary vocational and senior middle schools for junior middle school graduates total 810,000 persons, a figure somewhat in excess of the 1956 number of junior middle graduates, 787,000. Top priority for enrollment has been given to the senior middle schools, which plan to enroll 366,000 new students in 1957. Table 19 shows enrollment in secondary schools in 1952-57.

Table 19

Communist China: Enrollment in Secondary Schools
1952-57

Thousand

School	1952-53	1955-56	1956-57	First Five Year Plan
Senior	260	582	N.A.	724
Junior	2,230	3,318	N.A.	3,983
Total	2,490	3,900	5,200	4,707
Vocational	635	537	801	672

The stepped-up enrollment has had a deleterious effect on the quality of education in Communist China. Lengthening of the course of study only partially offsets this poor preparation and will delay graduation of the increased number of new students until 1961 or 1962.

Priority in building new higher education institutions and in reforming existing ones favors technical education. Over one-third of the college graduates during the First Five Year Plan will be from technical schools, with teachers occupying the next higher proportion of 25 percent. Preparation for teaching predominates in secondary vocational institutions, with graduates of such courses numbering 52 percent of the total and with engineering graduates second at 21 percent.

Continued competition for qualified personnel is implicit in the announced 12-year plan for education, which raises the annual new entrants target considerably above the First Five Year Plan goals. For example, the Minister of Higher Education has estimated that from 3 million to 4 million new students will be admitted during the coming 12 years, a tripling of the average yearly entrance rate of the First Five Year Plan. 66/ New goals for education in the Second Five Year Plan have been announced only in very broad generalities. Enrollment in colleges is to double by 1962, and the enrollment in secondary vocational, senior middle, and junior middle schools is expected to triple. 67/

b. Training of Skilled Workers.

The Ministries of Heavy Industry, Fuel Industries, and Machine Industries are responsible for meeting over half the Five Year Plan target of training 920,000 skilled workers. On-the-job training planned for 439,000 workers is both practical and easy to organize but becomes expensive when the master worker must interrupt his work for the benefit of only a few apprentices. In order to use the time of this skilled worker most efficiently, a system of technical training classes is being used to train 362,000 workers. The balance of the skilled worker trainees are to receive formal training in technical schools, which have been increased from 22 to 192 in 1956.

Although skilled and technical labor were both in short supply when the Communists came to power in 1949, skilled labor is now much less a problem. The relatively rapid advance made by the Chinese in training skilled labor, compared with training technicians and specialists, is mainly a function of the shorter time required for training, plus the lower investment cost for training skilled workers. It seems likely, moreover, that the goal of the Five Year Plan to train 920,000 skilled workers will be achieved without undue difficulties.

3. Wages.

a. Trends.

(1) Average Money Wage.

The wage series for all workers and staff and for industrial workers is presented in Table 20.* It is based largely on Chinese Communist announcements, which were not always clear as to type

* Table 20 follows on p. 70.

Table 20

Communist China: Index of Average Wages of Selected Workers
1952-62

	1952	1953	1954	1955	1956 Plan	1957 Plan	1962 Plan
Workers and staff							
Average money wages	100	112.8 a/	115.7 a/	120.2 a/	133.5 b/	133 c/	166 d/
Average real wages	100			112 e/			
Industrial workers							
Average money wages	100	111.4 f/	114 g/	114.7 g/		127.1 c/	
Average real wages	100	105 h/	106.7 i/	106.9 i/			

a. Derived by working backwards from an announced 20.2-percent increase in 1955 above 1952 68/; an announced 3.9-percent increase in 1955 above 1954 69/; and an announced 2.6-percent increase in 1954 above 1953. 70/
b. 71/
c. First Five Year Plan.
d. Second Five Year Plan.
e. 72/
f. Derived from an announced 2.3-percent increase in 1954 above 1953. 73/
g. Derived from an announcement that 1955 increased 0.6 percent above 1954 and 14.7 percent above 1952. 74/
h. 75/
i. Derived from an announcement that the 1955 increase above 1954 in real wages was 0.2 percent and that the 1955 increase was 6.9 percent above 1952. 76/

of wages and extent of the group affected, but the derived series gives a picture of wage movements which is not out of line with other price and wage data.

As noted in Chinese Communist literature, average wage increases continued to be substantial through 1953 and then leveled off. The movement contrary to this pattern in average money wages of all workers in 1955 probably is due to the shift of remaining government workers from the wages-in-kind to the cash wage system. The slower rate of increase of industrial wages reflects the higher base from which such workers have been raised. For example, the average yearly wage of employees covered by labor insurance in 1955 (principally industrial workers) was 750 yuan, whereas the average wage of the 18.5 million workers in economic departments was approximately 519 yuan. Workers outside the economic departments, such as primary school teachers and local government cadres, have even lower wages -- that is, from 240 to 360 yuan for the teachers and from 150 to 240 yuan for hsiang (township) cadres.

The wage reform of 1956 included among its features larger increases for these lower paid workers. The average increase for all workers was 13 percent, whereas primary school teachers were to receive a 33-percent increase; supply and marketing cooperative cadres, 26-percent; and hsiang cadres, up to 69 percent. The large increases for the latter three groups are almost identical with increases planned for them during the First Five Year Plan, indicating relative neglect of such workers in the earlier years of the Plan.

Other features of the 1956 wage reform were to give the greatest increases within the economic departments to workers in heavy industry and major construction areas and to high-level scientific workers and senior technicians. 77/ The differential for skilled workers was to be widened, with lower, or Grade 1, employees receiving an 8-percent increase, and the highest, or Grade 8 employees, an 18-percent increase. 78/ The fen (wage unit) calculation of wages, which tied wages to the price movements of five basic commodities, and local cost-of-living subsidies are to be abolished in favor of straight cash wages. Piece-rate wages are to be used as extensively as possible, and there are to be regular upward adjustments of basic work quotas. The original decision to make only slight increases in wages of workers in coastal industries was subsequently modified to harmonize with the increased production and investment planned for this area. 79/

(2) Real Wages.

Real wages have failed to keep pace with money wages. The greatest price rise affecting the workers' cost of living took place in 1953, when over half the increase in money wages was counteracted by price increases. The two wage series indicate that as of 1955 there had been a 7.3-percent increase in the workers' cost of living (see Table 20*).

Further inflationary inroads on the workers' real income were expected in 1956. Upward adjustments have been made in farm purchase prices, and, with wages no longer tied to price increases of basic commodities, these increases probably will be passed on to the worker in the form of higher retail prices. Relaxation of purchasing and price controls on handicrafts and subsidiary farm products, constituting 25 percent of retail trade, may also rob workers of the increased income effects of planned money wage increases. Possible shortfalls in anticipated output of agriculture and light industry resulting from the 1956 floods and typhoon may also have inflationary effects on worker income.

(3) Total Wages.

The planned 1956 wage increases were to raise the workers' total income by 1.25 billion yuan. When this total is related to the 13-percent proportion by which affected workers' average wages are to be increased, the implied total wage bill is 9.6 billion yuan. If private employees, who numbered 5.3 million, received 90 percent of the average wage in the socialized sector, the total wage bill for 1955 would be 13.1 billion yuan. The average yearly wage of 561 yuan has been moved back by the average wage index for all workers. Table 21** shows the total wages of office and factory workers in 1952-57 and 1962.

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* P.70, above.

** Table 21 follows on p. 73.

Table 21

Communist China: Total Wages of Office and Factory Workers 1952-57 and 1962

Billion Yuan

1952	1953	1954	1955	1956	1957 a/	1962 b/
9.8	11.9	12.4	13.1	14.3	14.9	23.3

a. Estimate based on achievement of the Five Year Plan goal for the labor force and maintenance of the 1956 average wage.
b. Estimate based on the Second Five Year Plan goals of an increase of 25 to 30 percent in average wages and an increase of 6 million to 7 million in the number of workers and employees.

b. Fringe Benefits.

The sum paid by the state and individual enterprises for labor insurance, medical services, culture and education, and welfare facilities for workers and employees ran about 13 percent of their total wages and totalled 4.4 billion yuan for the years 1952-55. 80/ If fringe benefit expenditure for other wage earners ran at least 6.5 percent of their wage bill, total fringe benefit costs for the 4-year period would have been 5.3 billion yuan. Central funds are spent for such facilities as sanatoria and old age homes. Local funds pay for old age and disability pensions, sick leave subsides and the like. Enterprises pay 3 percent of the wage bill for this insurance program and, in addition, pay medical expenses, educational expenses, and miscellaneous welfare expenditures.

IV. Trends in the Economy.

A. Agriculture.

Since mid-1955 a number of important policy decisions have been implemented by the Party leaders which deeply affect the structural organization of agriculture, state control of agricultural output, the proportions of investment funds allocated for agriculture, and the relative position and progress of agriculture in the planned economy. These decisions depart somewhat from Soviet precedent in generally recognizing the essential importance of agricultural improvement to the industrialization program and in postulating a balanced development of agriculture and light industry, along with heavy industry, as a means of expanding the capital resources of the state and providing the necessary incentives for greater efforts on the part of workers and peasants. The decisions are aimed generally at subjecting agriculture to more complete control within the planned economy. By means of rapid socialization, the underemployed labor of the peasants is to be regimented in projects to enclose small farm plots in large fields, to construct dikes and ditches for flood control and irrigation, and to fit the drainage system to the changed field pattern, and thus to facilitate large-scale cultivation and utilization of improved farm implements. Cooperativization is to provide the means for better planning of crop patterns and rotation, allocation of investment resources, and control of output through state channels.

The effect of the 1954 floods, in reducing agricultural output and thus the output of light industry and the hoped-for increases of budgetary revenues in 1955, focused the attention of the Party Central Committee planners on the need to bring agricultural production more completely within the orbit of central planning and control. Thus Mao Tze-tung, in his 31 July 1955 Report on the Cooperativization of Agriculture, after the relatively modest collectivization goals of the First Five Year Plan had already been accepted by the National Peoples Congress, called to task those Party members who had been guilty of "rightest conservatism" and pointed the way of rapid collectivization to coordinate agriculture with the program of industrialization 81/:

> In the first place, as we all know, the production level of marketed grain and industrial raw materials in our country today is very low, and the State's requirements of these resources are growing year by year.

This is an acute contradiction. If we cannot within the period of about three Five Year Plans basically solve the problem of the cooperativization of agriculture, that is to say, turn the small scale operations with animal power implements into large scale mechanized operations, ... then we shall not solve the present contradiction between the annually growing demand for marketed grain and industrial raw materials and the present low level of production of the major crops ... . In the second place, certain of our comrades have also failed to link together two important things, namely: in one of the most important departments of Socialist industrialization, heavy industry ... depends upon the use of its products in large quantities when agriculture has been placed on the foundation of large scale operation through cooperativization ... . In agriculture, under the conditions of our country ... we must first have cooperativization of agriculture before we can make use of large-sized machinery ... . Then, again, certain of our comrades have also failed to link together two other matters, namely: for the realization of the industrialization of the State and the technical reform of agriculture, large sums of capital are needed, and a considerably large portion must be accumulated from agriculture. Apart from the direct level of the agricultural tax, there is the development of the production of light industrial goods, which are the living needs of the peasants, to be exchanged for the marketed grain and raw materials of the peasants, so that both the needs of the peasants and of the State are satisfied, and capital is accumulated for the State. The large scale development of light industry not only calls for the development of heavy industry, but also calls for the /large-scale/ development of agriculture ... which in our country is the Socialist cooperativization of agriculture.

The 12-year Draft National Program for the Development of Agriculture was presented to the nation on 25 January 1956 by Liao Lu-yen, Minister of Agriculture. This Program detailed the methods by which the goal of doubling or tripling agricultural production by 1967 were to be achieved, including the long-needed large-scale flood control and irrigation projects on China's largest rivers and more extensive use of domestically produced chemical fertilizers beginning in the Third Five Year Plan. For the period of the Second Five Year Plan the Program was to concentrate on the utilization of more intensive labor of the cooperatives on small-scale flood control and irrigation projects, improved agricultural practices, extension of use of better seeds and pesticides, better storage and transportation facilities, greater use of natural fertilizers, a modest increase in use of chemical fertilizers, larger scale cultivation by enclosure of small plots in large fields, and gradual extension of the use of better tools and machinery. The principal anticipated results of the application of the new program were to be realized from the planned labor-intensive efforts of the cooperatives, the methods and objectives of which were thus succinctly summarized by Chen Po-ta, member of the Central Committee and occasional spokesman for Mao Tze-tung, in a speech before the Chinese Peoples Political Consultative Conference on 2 February 1956 82/:

> This plan ... relies on the possibility of agricultural producers' cooperatives raising labor productivity ... . /The draft National Program provides that/ every able-bodied man in the countryside should be able to work at least 250 working days a year, and that within the next seven years every woman in the rural areas should be able to devote at least 120 days to productive work, in addition to the time devoted to household work ... .

At the Eighth Party Congress in September 1956, after reviewing the Party program first enunciated by Mao in 1955 -- whereby the number of cooperatives had increased to nearly 1 million, incorporating 110 million of the 120 million farm households in the country -- Liu Shao-ch'i elaborated the means by which the cooperatives were to achieve the planned increases of agricultural production. 83/

In presenting his proposals for the Second Five Year Plan for agriculture at the Eighth Party Congress, Chou En-lai reaffirmed Mao's statement on the new Party line as to the indispensability of agricultural development for the development of heavy industry and the entire national economy 84/:

> Experience has shown us that industrial construction centered around heavy industry cannot and should not go on all by itself. It needs the coordination of other things, especially the coordination of agriculture ... .

In presenting the goals for increased agricultural production in the Second Five Year Plan, Chou reiterated the means of achieving increased yields per land unit, as mentioned by Liu Shao-ch'i, and for increasing cash and subsidiary crop sideline production, and added the important proviso that, "With regard to increasing the supply of fertilizers, on the one hand, the state should actively develop the fertilizer manufacturing industry and endeavor to import more chemical fertilizers ... ." This increased provision of imported chemical fertilizers is apparently to be accounted for as an expense of production and not out of the increased investment funds provided in the Second Five Year Plan. The other improvement measures for agriculture, however, are to be provided for out of the over-all doubling of investment in the Second Five Year Plan as compared with the First, including an increase from 7.6 percent of total investment funds allocated for agriculture in the First Plan to 10 percent of total investment funds in the Second Plan, which in absolute terms amounts to an increase for agriculture of about 260 percent -- from 3.2 billion yuan to 8.5 billion yuan.

Table 22* shows the relationship between the estimated production of the main food crops and population growth estimated at 1.5 percent per annum for the years 1952 through 1955 and projected through 1962 in comparison with the 1931-37 average. Table 22 shows that in the best year of agricultural production under the Communists, 1955, the per capita availability of food was only 89 percent of that in 1931-37 and that in order to realize the prewar average by 1957 an increase in food production of 38 million tons of food or 23.5 percent over 1952 would have to be realized. This compares with the Communist plan to increase the gross value of agricultural output 23.3 percent in 1957 over 1952, including an increase of 17.6 percent, or 31 million tons of food.

* Table 22 follows on p. 79.

Table 22

Communist China:
Population, Food Production, and Per Capita Availability of Food
1952-62

Year	Population (Million)	Population Index	Food Production (Million Metric Tons)	Food Index	Per Capita Availability of Food (1952 = 100)	Per Capita Availability of Food (1931-37 = 100)
1952	577.0	100	164	100	100	84
1953	582.6	101	166	101	100	84
1954	589.6	101	164	100	99	83
1955	596.7	103	180	110	106	89
1956	603.9	105	180	110	105	88
1957	611.1	106	187	114	108	91
1958	620.3	108	192	117	109	92
1959	629.6	109	198	121	111	93
1960	639.0	111	204	125	113	95
1961	648.6	112	210	128	114	96
1962	658.3	114	217	133	117	98

For the realization of an increase of food production to keep pace with the increase in population the Communists place their main reliance upon the wide extension of relatively small measures of improvement such as improved plowing; small-scale irrigation and flood control measures; pest and insect control; improvement of transportation, storage, and food processing; extension of double-cropping; and reclamation of waste land. The new emphasis in rapidly extending collectivization in order to enforce the adoption of improvement measures to increase output as well as to maximize the quantities of agricultural products passing through state trading channels, may result in their making substantial progress toward realization of the goals. The projected increase in investment in agriculture, the inauguration of large-scale irrigation and flood control projects in the Second and Third Five Year Plans, and the changed allocation of investment resources allowing for substantial increase in fertilizer use, make it appear possible that the Second Five Year Plan goals for increased food production may be reached at least by the end of the Third Five Year Plan.

In spite of the compulsion on the part of the state planners to accomplish wonders in improved production and peasant income in the first year of general cooperativization, several unforeseen factors have arisen to prevent the realization of at least part of the 1956 annual goals and even some of the 1957 goals for agriculture. In the excess of zeal with which the cadres in the countryside were directed to mobilize the cooperative members in small-scale irrigation and flood control labor projects, it was mistakenly assumed that the peasants were customarily idle during the winter months and that their conscription in the projects would result in increases in crop production and in net income in the immediate crop year. It was overlooked that the wholesale involvement of the peasants in enforced capital construction activities withdrew them from their usual winter sideline production and deprived them of the income that ordinarily tided them over until the next harvest. It was also not foreseen that the cost of some of the cooperatives' construction projects would exceed the value of the possible increase in cooperative production and income which might result from the projects, so that the members would suffer a decline in their annual income, thus diminishing their incentive to participate in the cooperative effort. Steps were taken to correct this "tendency to lay one-sided stress on collective and national interests while overlooking the interests of the individual" only after the error had been

committed. The Regulations for High Stage Cooperatives were phrased to provide that the total annual production dividend shares of the members should be 60 to 70 percent of cooperatives' income, which, according to Teng Tze-hui, would enable at least 90 percent of cooperative members to increase their income in 1956 over 1955.

Another example of partially wasted effort was the widespread allocation of conscripted cooperative labor in North and East China to well digging for irrigation purposes, "with the result that in some places the wells sunk were so numerous that they far exceeded actual needs, while in other places the wells sunk were not serviceable," as Teng Tze-hui phrased it. 85/

In the field of animal husbandry, it is apparent from refugees' and travellers' reports, as well as from the Communists' admissions, that the cooperatives have failed to exercise the responsibility and care for livestock that individual peasants formerly exercised, and that there has been an actual decline in livestock and fowl numbers. The situation became so serious that a State Council Directive on Hog Breeding was issued on 1 July 1956, admitting that the collectives were inexperienced and indifferent in hog raising, and that a concession should be made to private competence in this field on the principle of "private ownership, private breeding, and state assistance." The state assistance was indicated to include increased hog prices, the compulsory diversion of nearly all oil cake (residue from vegetable oil) to hog feeding, and the allocation during the ensuing year of 500,000 metric tons of grain for the purpose of advances for the contract purchase of hogs. Through these measures it was hoped to double the hog population by the end of 1957. Meanwhile, pork exports were cut 50,000 tons in 1956, and a recent article has indicated that in various local areas hog numbers have dropped to 2/5 or 1/3 of 1955 numbers. Since livestock breeding was one of the sidelines to which the peasants gave their attention during the winter months, it is probable that the decrease of production in this field was another casualty of the diversion of cooperative members to the irrigation and flood control corvees.

Aside from the miscalculations and wastage of effort contingent upon the structural reorganization of agriculture, the regime's dominant aim of increasing agricultural output in the first year of general cooperativization seems likely to be frustrated in some respects by adverse weather. It is still too early to estimate final crop yields, but the

Communists' preliminary estimate of exactly meeting their goal of an increase of 117,000 metric tons in 1956 over 1955 in cotton production seems somewhat too precise to be realistic, while the assertion that 1955 production of wheat was exceeded by 10 percent may understate the amount of losses due to the weather. The timing of the typhoon, which struck the cotton belt while the plants were still young, may have obviated the damage, although the losses must still have been considerable. Emergency efforts to save the wheat crop could have resulted in equalling or surpassing last year's production, but a 10-percent increase seems too high. Production of rice probably will top last year's record, because of the extension of the area of cultivation and double-cropping, although the targeted increase of 10 percent may be overly optimistic. The soybean crop may suffer a slight decline from last year because of floods in the important producing area of the Northeast, while other oilseeds will probably show an increase, along with tobacco, resulting from expansion of crop areas and increased allocations of fertilizer. Estimates of total production of the important food and technical crops for 1950-56 and projections thereof through 1962 are given in Table 23.*

It is clear from the plans that have been promulgated and from the intensive organizational and productive efforts that have been put forth this year that the Chinese Communists have finally evolved an integrated plan for the development of agriculture -- a plan which is deficient in only one major aspect -- the amounts of chemical fertilizers to be utilized. The progress made in agriculture in 1956 is an important step toward realization of a better balanced economic development program. Probably the 1956 results will not be satisfactory to the planners in many respects, but on the whole the outcome of increased production and state control of output will exceed in magnitude the effects of the state's program of forced procurement of grain and technical crops that began in November 1953.

B. Industry.

Industry in Communist China has generally recovered from the war years with production of major industrial commodities meeting or exceeding pre-Communist levels of output. A program to develop the industrial base of the economy has been initiated, and some success has been achieved toward the goal of developing heavy industry. However, per capita production remains low, and despite recent economic advances Communist China still lags behind other advanced Asian nations as well as the US and the USSR. This is graphically shown in Table 24.**

* Table 23 follows on p. 83.
** Table 24 follows on p. 84.

Table 23

Communist China: Estimated Production of Food and Industrial Crops
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Rice	Million metric tons	58	61	68	70	66	73	78	80	82	85	88	92	95
Wheat	Million metric tons	17	18	18	18	23	23.5	22	23	24	25	25	25	26
Other grains	Million metric tons	52	50	52	51	49	55	52	53	54	55	58	59	60
Tubers (grain equivalent)	Million metric tons	13	15	16	17	17	19	19	20	21	22	22	23	24
Soybeans	Million metric tons	8.7	9	9.5	9.5	9	9.5	9	11	11	11.1	11.3	11.5	12
Total grains	Million metric tons	149	153	163	166	164	180	180	187	192	198	204	210	217
Meat (carcass weight)	Thousand metric tons	5,207	5,359	5,513	5,665	5,819	5,533	5,922	6,120	6,338	6,540	6,760	6,990	7,225
Poultry	Thousand metric tons	324	330	338	345	352	360	368	376	385	392	401	410	417
Fish	Thousand metric tons	911	1,252	1,710	1,741	2,000	2,400	3,000	3,450	3,968	4,563	5,247	6,034	6,939
Eggs	Thousand metric tons	884	903	921	941	960	981	1,000	1,021	1,043	1,065	1,087	1,110	1,132
Oilcake	Thousand metric tons					6,750	6,850	6,950	7,000	7,050	7,100	7,150	7,200	7,250
Tung oil	Thousand metric tons					85	85	90	100	105	110	115	120	125
Sugar beets	Thousand metric tons	184	308	479	505	989	1,596	1,868	2,135	2,238	2,550	2,875	3,188	3,500
Sugar cane	Thousand metric tons	3.3	4.6	7.1	7.2	8.6	8.1	12.8	13.2	18.3	20.9	23.5	26.1	28.7
Sugar (raw value)	Thousand metric tons	376	408	451	524	597	688	894	1,100	1,280	1,460	1,640	1,820	2,000
Wheat flour (modern mills)	Thousand metric tons	1,200	1,400	3,000	3,000	3,300	3,800	4,590	4,700	4,682	4,774	4,847	4,920	5,012
Edible vegetable oil	Thousand metric tons	847	981	1,133	1,070	1,078	1,263	1,364	1,434	1,466	1,503	1,543	1,584	1,625
Rapeseed	Thousand metric tons	800	865	932	887	878	969	1,154	1,188	1,224	1,260	1,298	1,337	1,377
Sesame seed	Thousand metric tons	150	338	525	428	330	367	390	413	436	459	482	505	525
Peanuts	Thousand metric tons	1,618	1,966	2,316	2,127	2,767	2,926	3,372	3,473	3,577	3,684	3,795	3,909	4,026
Tea	Thousand metric tons	62.5	65	82.4	84.7	92.1	108	112	127.8	143.6	159.4	175.2	191	207
Tobacco	Thousand metric tons	36	180	222	213	232	298	345	373	420	473	533	600	600
Cotton (ginned basis)	Thousand metric tons	710	1,045	1,305	1,175	1,065	1,518	1,635	1,745	1,806	1,959	2,112	2,265	2,400
Wool (grease)	Thousand metric tons	34	34	34	34	35.4	36.1	36.8	37.5	38.2	39	39.8	40.6	41.4
Silk (raw)	Thousand metric tons	2.7	3.0	4.3	4.2	4.2	4.2	4.3	4.3	4.4	4.4	4.5	4.5	4.6
Industrial wood	Million cubic meters	10.0	10.7	11.9	16.7	20	24	26	28	30	32	34	36	38
Fuel wood	Million cubic meters	15	15	15	15	15	15	15	15	14	13	13	12	12

Table 24

Communist China: Gross National Product and Production of Principal Commodities Compared with Those of Selected Countries
1955

	Total						Per Capita					
Commodity	Unit	Communist China	USSR	India	Japan	US	Unit	Communist China	USSR	India	Japan	US
Gross national product a/	Billion US $	37	145	27.5	21.3	387	US $	62	740	71	238	2,345
Grains b/	Million metric tons	171	120	78.6	19.5	143.6	Kilograms per year	287	611	206	219	870
Cotton cloth	Billion linear meters	3.8	5.9	4.7	3.1	9.2	Linear meters per year	6.4	30	12	35	56
Coal	Million metric tons	93.6	391	38.8	43.8	450	Kilograms per year	157	1,995	100	489	2,727
Crude steel	Million metric tons	2.9	45.3	1.7	9.4	106	Kilograms per year	4.9	231	4.4	105	642
Electric power	Billion kilowatt-hours	12.3	170	8.5	63.6	625	Kilowatt-hours per year	21	867	22	711	3,788
Crude oil	Million metric tons	1	70.8	0.3	0.3	336	Kilograms per year	1.7	361	0.79	3.4	2,036
Cement	Million metric tons	4.5	22.5	4.6	10.6	49.9	Kilograms per year	7.5	115	12	118	302
Rail freight traffic	Billion ton-kilometers	98.1	971	50 c/	42	953	Ton-kilometers per year	164	4,954	130	469	5,776

a. Calculated at current dollar exchange rate and does not compare prices between countries.
b. Including potatoes at 0.25 of gross weight; and excluding soybeans.
c. 1954 traffic.

The share of total output originating in industry has shown a rapid rise (see Table 39* and discussion of gross national product) and a growing proportion of industrial output is originating in areas of the economy dominated by the state (see Table 2** and discussion of industrial socialization). There have been large increases in industrial output, with heavy industry demonstrating a more rapid growth relative to consumer goods. This is indicated in the index presented in Table 25.***

From 1949 to 1952 large increases in industrial output were achieved, reflecting the integration of the economy under one government. In the first 2 years of the industrialization program, 1953 and 1954, substantial progress was made in developing industrial output. A sharp decrease in the rate of increase was noted in 1955, especially in light and handicraft industries, reflecting in part disruptions due to the widespread floods of 1954. In 1956, with a number of construction projects being completed, the rate of increase again was significant. During the First Five Year Plan, industry, excluding individual handicraft, has exhibited an average annual growth rate of about 18 percent, with heavy industry averaging better than 20 percent. Industrial growth during the next few years, however, will probably be tempered by the capabilities of the rail transport system, by disruptions in new industrial construction caused by events in the European Satellites, and by compounded problems arising from the imbalance in the over-all development plan.

During the Second Five Year Plan, 1958-62, the rate of industrial growth is expected to decline somewhat, averaging about 14 percent per year, with heavy industry averaging about 15 percent. Industrial production in heavy industry should show a marked increase in 1960, however, when the Pao-t'ou and Wu-han iron and steel complexes, truck and tractor plants, refineries, and other installations are scheduled to come into full production.

Heavy industry receives a much greater emphasis in development than light industry. As shown in Table 25, light industry demonstrated its most rapid growth before 1955, reflecting the reorganization and development of textiles, food processing, and other industries; but since 1954, and projected through 1962, growth in light industry will probably average less than 9 percent annually, with almost all of this

* P. 131, below.
** P. 27, above.
*** Table 25 follows on p. 86.

Table 25

Communist China: Index of Value Added by Industry
1950-62

1952 = 100

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Heavy industry	48	72	100	135	163	185	224	253	281	328	388	454	532
Percent of annual increase		50	39	35	21	18	21	13	11	17	18	17	17
Light industry	56	73	100	115	139	140	158	173	189	207	230	247	272
Percent of annual increase		30	37	15	21	1	13	9	9	10	11	7	10
Industry, including handicraft workshops	51	73	100	127	154	167	198	222	246	281	327	375	433
Percent of annual increase		43	37	27	21	8	19	12	11	14	16	15	15
Individual handicraft	58	78	100	121	143	134	156	161	177	194	214	224	235
Percent of annual increase		34	28	21	18	-6	16	3	10	10	10	5	5
Total industry (including individual handicraft)	53	74	100	126	152	161	190	209	232	263	303	343	390
Percent of annual increase		40	35	26	21	6	18	10	11	13	15	13	14

growth in textiles. On the basis of gross value of production including handicrafts, the Chinese plan to balance light and heavy industry by 1962. Excluding individual handicrafts, however, in 1952 light industry contributed 61 percent compared to 39 percent for heavy industry, whereas by 1957, both sectors are planned to contribute an equal amount. By 1962, heavy industry is projected to contribute 56 percent compared with 44 percent for light industry.

1. Engineering Industries.

Although still generally limited to the production of parts and assembly, repair, and manufacture of simple machinery and equipment, Communist China's engineering industries are oriented toward future indigenous production of a full range of producer goods. Advances during the past several years have been noteworthy. Engineering industry projects under the Five Year Plan, a number of which have been completed, are designed to provide more diversity of product mix as well as to augment capacity to produce larger numbers of complete units and more complicated types of machines.

Machine building industries are heavily emphasized in this program. Development of these industries began from a very small base. Before the Communist regime, machine plants were engaged largely in repairing and assembling machines with imported parts. Complete machines were occasionally manufactured but were of simple design involving only simple manufacturing techniques. The Communists, however, have converted repair plants into manufacturing establishments and have consolidated many small machine shops into a relatively small number of larger ones. Many older establishments are being renovated or expanded, and several important new machinery manufacturing installations are being built. Shanghai remains the most important single center of machine industries in China, while the Northeast is the chief regional producer. Production of the engineering industries for 1950-62 is shown in Table 26.*

In textile machinery manufacture, the Chinese were able to make substantial advances by consolidating small machine shops and utilizing a labor force familiar with textile machinery operation and repair. As new plants built under the Five Year Plan came into operation during 1953 and 1954, production greatly expanded. China presently is self-sufficient in the production of textile machinery for

* Table 26 follows on p. 88.

Table 26

Communist China: Estimated Production of the Engineering Industries
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Turbines	Thousand kilowatts	4	5	6.7	15	45	90	164	189	217	249	287	330	379
Batteries	Metric tons	730	1,000	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,400	2,500	2,700
Electric lamps	Million units	16	21	29	32	34	36	38	40	43	45	48	51	54
Electric wire and cable	Million US $	16.7	19.5	22.9	25.4	30.7	64.1	90.4	117.2	131.3	147	164.7	184.5	203
Electric motors	Thousand kilowatts	200	335	639	902	713	524	1,048	1,153	1,122	1,296	1,373	1,456	1,543
Electric generators	Thousand kilowatts	Negligible	2.7	30	59.4	61.8	108	281	331	351	372	394	418	443
Transformers	Thousand kilovolt-amperes	570	815	1,167	1,961	1,961	2,079	2,430	2,610	2,767	2,932	3,108	3,294	3,492
Switchgear and switchboard apparatus	Thousand US $	1,400	2,000	3,600	5,600	6,100	6,400	6,700	7,200	7,600	8,100	8,600	9,100	9,600
Radio communications equipment	Thousand US $	1,100	1,900	2,850	3,000	3,200	3,400	3,600	3,800	4,000	4,300	4,500	4,800	5,056
Telephone handsets	Thousand units	35	48	64	74	85	98	110	130	150	170	200	230	265
Telephone switchboards	Thousand lines	19	28.5	43	46	48.5	51	54.5	58	61	65	69	74	79
Textile machinery	Thousand spindles	0	64	250	286	400	500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Thousand looms	0	4	6	8.5	13	8	15	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Machine tools	Thousand units	3.3	5.9	13.7	20.5	15.9	13.7	27.0	29.0	N.A.	N.A.	N.A.	N.A.	N.A.
	Thousand metric tons			16.3	24.0	23.5	23.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Agricultural equipment (new type only)	Thousand units	Negligible	Negligible	300	343	429	1,300	19,500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Locomotives	Units	0	0	20	1	52	98	184	160	N.A.	N.A.	N.A.	N.A.	N.A.
Freight cars	Units	0	0	5,792	4,500	5,445	9,258	5,480	6,450	N.A.	N.A.	N.A.	N.A.	N.A.
Passenger cars	Units	0	0	6	42	90	150	200	350	N.A.	N.A.	N.A.	N.A.	N.A.
Trucks (4-ton ZIS-150 and 2-1/2-ton GAZ-51)	Units	0	0	0	0	0	0	1,000	4,000	10,000	16,000	27,000	38,000	45,000
Tractors (Belarus, DT-24 and DT-54)	Units	0	0	0	0	0	0	0	150	2,000	5,500	13,500	17,500	20,500
Naval vessels	Thousand standard displacement tons	0	0.3	2	4	6	10	14	19	23	28	33	38	43
Merchant vessels	Thousand gross register tons	3	4	9	2.5	13	8	10	11	12	13	14	15	16
Inland vessels														
Self-propelled	Thousand horsepower	14	17	8	1	2	9	16	23	30	37	44	51	58
Non-self-propelled	Thousand deadweight tons	12	13	14	1	3	26	33	40	48	55	62	69	76
Fishing vessels	Thousand gross register tons	0	0	0	0	2	3	3	3	4	4	5	5	5
Aircraft	Units	0	0	0	0	0	23	274	382	359	390	396	396	396

her growing textile industry and is in a position to offer complete sets of spinning and weaving machinery on the export market.

Production of machine tools has been greatly increased due to the more efficient and intensive use of existing facilities. Under the Five Year Plan, four major plants are under construction or renovation. Production in 1954 and 1955 was cut in terms of numbers of units apparently from overproduction of certain types and as a result of a shift in product mix to heavier types of metal cutting and shaping tools. The more modern machine tools produced by the Chinese are copies of Soviet or European Satellite models. All production thus far has been of general-purpose types, such as lathes, milling machines, and shapers. Except for a few models in mass production, most have been built as prototypes. As yet the Chinese have not designed a machine tool, and the quality of domestically manufactured tools has been a constant source of internal complaints. 86/ The Chinese must still rely upon the USSR for more special-purpose types of machine tools.

The agricultural equipment industry has been forced to expand somewhat by the agricultural cooperativization program. Planning has been poor, and production schedules have been raised excessively. The 1956 Plan for horse-drawn wheeled plows was continually revised until it amounted to over five times the original 1957 Plan, 87/ and then because inventories far exceeded demand, production was curtailed during the latter half of the year. Quality of product has been low, and shortages of facilities have required that production be initiated at many machine tool plants, handicraft cooperatives, and at literally thousands of small workships and other factories unfamiliar with agricultural equipment production. Production of most items is presently still far short of actual requirements. 88/ Priority will probably continue to be accorded the industry for necessary production equipment, raw materials, and new plant construction.

Production of chemical and refining equipment in Communist China is still extremely limited, and development and expansion of the chemical and petroleum industries remain largely dependent upon imports of equipment.

Communist China's electrical machinery industry has made nominal advances, but the industry is still relatively small and China is required to import almost all of the more complicated equipment. The average size of the motors, generators, transformers, and turbines

produced is increasing slowly, but the larger items in the product mix are generally in limited production. The variety of wire and cable products has increased also but is still limited. There have been few changes in the product mix of electronic and telecommunications equipment, and production consists of conventional items such as radio receivers and telephone handsets. Production of electronic components has been introduced on a small scale. Upon completion of the telecommunications combine under construction near Peiping, the Chinese Communists will become much more self-sufficient in electronic components and will be able to produce more complicated electronic and telecommunications end products. The electrotechnical industry still lags behind other machine building industries in quality of product. Lack of modern equipment and qualified personnel has resulted in extremely inferior products, especially the newer, more complicated, highly engineered types.

There has been considerable advance in the manufacture of transportation equipment. Steam locomotives have been produced of parts entirely manufactured within China, 89/ and an increased efficiency of operations has been achieved at locomotive and car shops. New techniques, such as welding, have been introduced for freight car construction, and quality control is being improved. Production of railroad equipment has been concentrated at three main shops -- at Ch'i-ch'i-ha-erh, Ssu-fang (near Tsingtao), and Dairen. The Chinese Communists have imported rolling stock on a very limited scale, and domestic production has reached a rate such that expansion of carrying capacity based on indigenous resources is possible for the rail lines.

In the field of motor vehicles manufacture, production of 4-ton ZIS-150 trucks was initiated in 1956 at the No. 1 Automobile Plant at Chang-chun, and it is estimated that by 1960 this plant will reach full production of 30,000 units per year. A second truck plant, probably to be located in Wuhan, is scheduled for completion by 1960 and will produce a 2-1/2-ton truck, presumably the Soviet model GAZ-51.

Chinese Communist production of Soviet model tractors will begin by 1957. The Tientsin tractor plant, producing the Soviet Belarus tractor, is to initiate line production at that time and should reach full production by 1959. 90/ Trial production of the Soviet DT-24-type tractor is to begin in 1956 at the Nanking tractor plant, and limited production is scheduled for 1957. This plant is to be completed in 1959 and should achieve capacity production by 1960. Construction of the new, large tractor plant at Lo-yang is reportedly ahead of schedule and possibly will be completed in 1958. Production

of the Soviet DT-54 tractor at this plant could then reach full capacity by 1962. There also have been reports of another tractor plant, possibly at Chang-chun, which will produce the Belarus tractor.

In the field of aviation, in a short time the Chinese Communists have been able, with the assistance of the USSR, to bridge a significant technical gap. Results of this progress are newly constructed aircraft factories, 91/ an established Aeronautical Institute, 92/ production of trainer aircraft, 93/ and trial production of jet engines and jet aircraft. 94/ Trial production of YAK-18 conventional primary trainers was initiated, probably at the Nanchang aircraft plant, in 1954; line production is estimated to have been achieved by late 1955. It is estimated that annual production could reach 300 aircraft by 1957. All instruments, radio equipment, armaments, and other technical components for the aircraft will be supplied by the USSR. Initially the Chinese Communists will assemble the low-powered reciprocating engines from parts supplied by the USSR, but by 1960 they will be producing the engines and should be able to furnish one-half of the raw materials required. By 1960 the Chinese Communists will be able to furnish about one-half of the raw materials required for airframe production.

In September 1956, Communist China announced the successful trial production of jet aircraft, probably at the large aircraft plant at Mukden North Airfield. The first aircraft to be produced (and possibly the first 2 years' production) will be assembled from Soviet-furnished parts. Production of jet aircraft should steadily increase and could reach 96 aircraft annually by 1960. The Chinese were assembling jet engines in 1956 and by 1962 should be producing engine parts equivalent to 40 percent of the total value added in engine production. By 1960 the Chinese will be able to furnish about one-half of the raw materials required for jet airframe production, but the USSR will be required to supply all electronic components, hydraulic systems, and the like.

Chinese shipbuilding has advanced rapidly, largely as a result of significant assistance of material and technical aid from the USSR. At the principal yards at Dairen and Shanghai, larger and more complex vessel-types have been constructed. Medium-sized merchant vessels were produced in 1954, and in 1955 a relatively large naval shipbuilding program was undertaken. The trend in shipbuilding is toward the more complex steel vessels. Priorities apparently are being given to small combatant naval vessels, tugs, and barges in that order, whereas only small numbers of fishing vessels and cargo

vessels are being constructed as capacity becomes available. Shipping requirements for coastal cargo vessels are being met through import of Bloc-constructed tonnage. On the inland waterways, the trend toward establishment of a Western-type fleet of tugs and barges continues. Although some yards are still producing junks, more and more yards have begun construction of conventional-type vessels.

2. Armaments Industry.

Although not yet able to meet all equipment requirements of the Chinese Communist armed forces, the armaments industry is believed to be proceeding with a program of gradual modernization. Requirements for weapons, including light artillery and machine guns, were probably fulfilled by indigenous production before 1956, permitting cutbacks in 1956 and 1957. Facilities for the production of heavier armaments are being developed which will permit production of tanks and possibly antiaircraft artillery by 1960. Table 27* shows estimated production of weapons and ammunition for 1950-62. Estimated ammunition production capacity is also shown, and is indicated to be increasing at a steady rate. Estimated minimum production of ammunition for 1954-62 was calculated on the basis of roughly one-third of estimated capacity. In anticipation of or in the event of war, it is believed that actual production could be quickly expanded to the capacity figure.

3. Electric Power.

Development of electric power is a realized requisite in the expansion of China's industrial plant. During the First Five Year Plan the Chinese Communists plan on initiating 4.06 million kilowatts of new capacity, of which 2.05 million kilowatts are to be installed and operating before the end of 1957. Electric power production during the first 3 years of the plan has been increased about 18 percent annually, and it is estimated that this rate of increase can be maintained through 1962. In addition to increasing installed capacity, the Chinese have also increased production by raising the over-all utilization of the power system. Even so, the rate of growth of the electric power industry has not kept pace with the rate of growth of industry as a whole. Investment for electric power during the Second Five Year Plan, however, is to be double that expended during the First Five Year Plan and should enable the power industry to more fully service the expanding industrial plant.

* Table 27 follows on p. 93.

Table 27

Communist China: Estimated Production of Armaments and Munitions
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Ammunition (all types)														
Production	Thousand metric tons	41	47	54	54	22	23	24	25	26	28	30	30	30
Capacity	Thousand metric tons	41	47	54	62	65	68	71	75	79	83	87	91	95
Artillery	Thousand pieces	0.2	0.2	1.0	1.2	1.4	1.6	1.6	0.6	0.6	0.6	0.8	0.8	0.8
Mortars	Thousand pieces	0.8	1.	5.	5.8	7.	8.	3.	3.	3.	3.	3.	3.	3.
Machineguns	Thousand pieces	2.	2.2	10	11.6	13	15	16	5	5	5	5	55	5
Small arms	Thousand pieces	36	43	207	234	260	260	100	100	100	100	100	100	100
Armored vehicles	Units	0	0	0	0	0	0	0	0	0	0	300		

Much of the new capacity being installed is located to support the planned development of inland industrial centers. Among these projects are the million-kilowatt hydroelectric stations now being surveyed at the Sanmen and Liu-chia Gorges on the Yellow River, the Yili-ho power project in Yunnan, and the Tzu-ping-pu power station on the Min River in Szechuan. Table 28* shows the estimated capacity and production of electric power for 1950-62.

4. Petroleum.

Production of crude petroleum and shale oil in Communist China has been inadequate to meet estimated demands which have required large imports of crude oil and refined products from the Soviet Bloc. In 1955, when production of crude products was about 980,000 metric tons, Communist China imported an additional 250,000 metric tons of crude oil and 1 million tons of refined products. Although it has been officially announced that crude production would not meet planned goals in the First Five Year Plan, China is making a concerted effort to increase crude oil production and refining capacity. Investment for the Ministry of Petroleum in the Second Five Year Plan is to be 3 to 4 times the amount invested in the First Five Year Plan, representing a much heavier proportion of investment for petroleum in relation to other sectors of the economy than had previously been noted. The 1962 production goal of 5 million to 6 million metric tons represents an average annual increase in production of about 29 percent compared with an average annual increase of about 27 percent in the First Five Year Plan.

Increased production of natural crude oil is related to increased production at Yumen, development of new fields in the Tsaidam and Dzungaria Basins, and the completion of large refineries at Lan-chou and in the Karamai oilfield. The first phase of the Lanchou refinery is expected to go into production in 1958, and by 1960 the plant is to be at full refining capacity of about 2 million tons. Expansion of transportation facilities to the Yumen oilfield and into the new Tsaidam and Karamai oilfields will expedite the exploitation of these crude oil resources. Increases in production of synthetic crude oil are dependent upon completion of new plants during the Second Five Year Plan.

* Table 28 follows on p. 95.

Table 28

Communist China: Estimated Production of Fuels and Power
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Electric power														
Capacity	Million kilowatts			2.03	2.24	2.58	3.05	3.6	4.2	4.8	5.6	6.4	7.4	8.5
Production	Billion kilowatt-hours	4.6	5.8	7.26	9.15	11.	12.3	14.1	17.	20.1	23.1	27.9	32.8	38.7
Coal	Million metric tons	41	51	64	67	80	94	105	113-120	125-134	139-150	155-168	172-188	190-210
Petroleum products														
Crude oil														
Natural	Thousand metric tons	110	160	210	320	440	530	660	1,020	1,400	1,950	2,600	3,300	4,300
Synthetic	Thousand metric tons	90	140	220	300	350	450	540	580	600	650	700	1,000	1,200
Total		200	300	436	620	790	980	1,200	1,600	2,000	2,600	3,300	4,300	5,500
Gasoline (refined products include imported crude through 1955)	Thousand metric tons	46	58	130	170	200	240	220	310	410	550	720	925	1,200
Kerosine	Thousand metric tons	12	18	43	65	78	100	130	180	240	320	420	540	700
Diesel fuel oil	Thousand metric tons	7	11	22	32	38	48	60	80	100	130	160	220	280
Lubricating oil	Thousand metric tons	5	8	16	25	30	35	33	51	70	98	130	165	215
Residuals (fuel oil, asphalt, coke, and other residuals)	Thousand metric tons	100	160	290	410	500	640	620	780	950	1,200	1,500	1,970	2,500

By 1960, planned production of natural crude oil will exceed estimated Chinese refining capacity and, by 1962, nearly 2 million tons of additional capacity will be required to process domestic production of crude oil.

China will probably continue to import refined petroleum products at the 1955 rate through 1960, but by 1962 imports should be reduced to about 500,000 tons annually. Imports of crude oil will probably decline to less than 100,000 tons in 1957, and no imports of crude would be expected by 1960.

The Chinese Communists have directed considerable effort toward improvement of the quality and variety of output of refined products as well as toward increasing total production and, with the exception of aircraft fuels and high-grade lubricants, a relatively complete line of products is produced. In 1955, over one-quarter of Chinese imports of POL were aircraft fuels and high-grade lubricants. The Lan-chou refinery is expected to inaugurate production of aircraft fuels when it goes into operation, probably in 1958, but it will probably produce only small amounts of these fuels initially. The Yumen refinery has tested and produced a number of essential high-quality lubricants and apparently is planning to expand production of this type of product. Establishment of research institutes, such as the large laboratory at Yumen, emphasizes the Chinese desire to improve the quality of domestically produced petroleum products. Table 28* shows the estimated and projected production of petroleum products for 1950-62.

5. Coal.

Communist China's coal industry is experiencing a considerable slow down in development which may affect the general industrial sector. The 1957 production goal, originally set at 113 million tons, 95/ raised to 120 million tons, 96/ and then to 130 million tons, 97/ has apparently been scaled back to between 113 and 120 million tons. 98/ Unfavorable conditions developing during 1956 caused a curtailment in plans to produce 109 million tons of coal during that year. Increasing congestion on the railroads has been a hindrance to coal production, which is heavily dependent upon adequate rail car supply and transportation service to move coal from the mines. It is estimated that over 80 percent of coal production has to move over the railroads. In addition, there have been numerous reports of timber and steel shortages

* P. 95, above.

in construction projects, and combines and other equipment have failed to arrive as planned, delaying completion of new mines. China's coal industry is almost completely dependent upon the USSR for supply of such things as combines, cutters, and conveyors, as well as for technical construction and operating assistance. Delays in the completion and equipping of mines now under construction could cause production to fall seriously short of the plan.

Although there have been scattered reports of local coal shortages, at the present time the over-all coal supply appears adequate to meet domestic requirements and allow for limited exports. It is estimated that China's industrial plant uses over 25 percent of coal production, electric power generation and the railroads each consume an additional 10 percent of production, and home consumption probably uses at least 45 percent of production.

During the Second Five Year Plan, planned coal production is to increase about 25 percent annually. As the Chinese have for the first time given coal production goals for 1962 with a range of 15 percent, however, it would appear that there is some doubt about the actual increase in coal mine capacity that will be needed or provided. Table 28* shows the estimated and projected coal production for the years 1950-62.

6. Ferrous Metals.

Communist China's priority development of the iron and steel industry is reflected in the substantial progress made since 1952 and in the ambitious goals recently announced for the Second Five Year Plan. Although China's production of crude steel in 1952 was less than 20 percent of that of the advanced industrial nation of Japan, this ratio will rise to 40 percent in 1957 and to almost 80 percent in 1962. Great strides are being taken to overcome the imbalance between pig iron, ingot steel, and finished steel capacities inherited from the pre-Communist period, and it is estimated that this defect will be corrected by the end of the Second Five Year Plan.

However, the ferrous metals industry is still unable to satisfy the great demands imposed upon it by Communist China's forced industrialization program. Despite the recent announcement that finished steel output in 1956 will be 600,000 tons above the previous

* P. 95, above.

goal, it will be necessary to import an additional 750,000 tons in an attempt to meet domestic requirements. 99/ It is questionable whether even these measures will serve to remedy what Chou En-lai has described as "the serious deficiency" of steel encountered in the 1956 capital construction program. 100/ A perennial problem of the industry is the low percentage of high-grade iron ore, which accounts for only some 20 percent of total ore reserves, and the consequent necessity for large-scale construction of ore-dressing and sintering plants. Moreover, as Communist China is as yet deficient in chromium and nickel, 101/ the USSR will have to continue to supply the increasing amounts of nickel and ferrochrome required for China's stainless steel production.

The rehabilitation and expansion of Communist China's iron and steel industry has been under the direction of Soviet specialists, large numbers of whom are supervising the construction and operation of plants designed in the USSR and the installation of equipment largely manufactured in the USSR. Achievement of the 1962 crude steel production goal of 10.5 million to 12.0 million tons will depend largely on further expansion of the An-shan Iron and Steel Company and the construction of the planned new iron and steel combines at Wu-han and Pao-t'ou, although a recent announcement envisages the development of the Chungking Iron and Steel Works into a major ferrous metals complex by that date. 102/ It is estimated that both Wu-han and Pao-t'ou will be in partial production by 1960, 1 and 2 years, respectively, ahead of the schedule provided in the First Five Year Plan for completion of the initial phase of these projects. Table 29* presents the estimated production of ferrous and nonferrous metals and minerals in 1950-62.

Improved technology has resulted in higher quality production of ferrous metals, with announced rejection rates for 1955 of 2.96 percent for pig iron, of 1.7 percent for open-hearth steel, of 0.9 percent for Bessemer steel, and of 1.4 percent for ordinary steel products. 103/ It is probable, however, that inspection standards in the iron and steel industry are lower than those in Western nations, in view of the acute shortage of ferrous metal products in China. A much higher but unspecified rate of rejections of new kinds of finished steel products is admitted.

* Table 29 follows on p. 99.

Table 29

Communist China: Estimated Production of Ferrous and Nonferrous Metals and Minerals 1950-62

Thousand Metric Tons

Industry	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Ferrous metals													
Pig iron	960	1,400	1,870	2,230	3,030	3,630	4,540	5,375	6,035	6,300	7,300	8,300	9,500
Crude steel	605	890	1,350	1,760	2,200	2,853	4,516	4,900	5,100	6,100	7,600	9,250	11,100
Finished steel	360	688	1,110	1,487	1,740	2,220	3,387	3,675	3,825	4,575	5,700	6,938	8,325
Coke	1,275	1,945	2,860	3,600	4,500	5,200	5,900	6,685	7,000	7,400	8,300	9,200	10,000
Iron ore	2,082	3,159	4,058	6,233	8,408	10,583	12,745	14,918	15,100	15,800	18,000	20,800	23,400
Tungsten (concentrate, 68 percent WO_3)	11	11.6	15.8	17.4	19.	20.5	22.1	23.7	N.A.	N.A.	N.A.	N.A.	24.
Manganese ore (+35 percent Mn)	70	83.6	123.8	134.7	168.4	196.	280	310	350	380	450	530	620
Molybdenum (metallic equivalent of MoS_2)	0.125	0.515	0.55	0.575	0.575	0.6	1.05	1.07	N.A.	N.A.	N.A.	N.A.	1.2
Nonferrous metals													
Copper (refined)	4	6	8	10.9	12.6	12.9	13.2	13.6	14.	14.3	14.7	15.1	15.5
Tin	6	7	9.8	11	13	16	16	18	20	22	24	26	29
Lead	4	5	7	12.3	22.2	22.5	22.8	23.1	23.4	23.8	24.2	24.6	25
Zinc	2.7	3	3.5	5.2	6.8	7.9	8.3	11	13	15	17	20	22
Antimony	6	8	10	11	11	11	11	11	11	11	11	11	11
Aluminum	0	0	0	0	2	10	12	20	20	40	60	80	100
Fluorspar	5	5	5	10	15	17.5	20	23	27	31	36	42	48
Salt	3,420	3,600	4,945	5,400	5,600	6,000	6,700	7,600	8,100	8,800	9,600	10,400	11,000

7. Nonferrous Metals.

Development of the nonferrous metals industry is a major goal in the economic planning of Communist China. With the exception of copper and aluminum, current production of nonferrous minerals is sufficient for internal needs and leaves a surplus for export. Expansion of the Ko-chiu tin mines and refinery in Yunnan Province is one of the key Soviet-aid projects and is designed to help satisfy Bloc requirements for this metal. Other nonferrous minerals exported in large quantities to Bloc countries are antimony, fluorspar, mercury, and zinc concentrates.

Communist China will continue to rely on imports of refined copper from the rest of the Soviet Bloc during the period of this estimate, however, thereby aggravating the shortage of this metal throughout the Bloc area. Despite strenuous efforts to increase copper production from deposits in Northeast, Southwest, and Northwest China and the planned construction of a new copper refinery (as yet unlocated), 104/ Communist China is not expected to achieve self-sufficiency in copper until well after 1962.

On the other hand, the Second Five Year Plan target of 100,000 tons of aluminum production by 1962 appears excessive in view of internal requirements for this commodity. Communist China possesses a raw material base adequate to supply the planned increase in output, although this raw material is aluminous shale and is poorer in quality and more costly to exploit than the commonly used bauxite. The major deterrent to the accomplishment of the 1962 goal is the lack of metal reduction capacity. As the Fu-shun Aluminum Plant, the only known aluminum reduction plant in China, is already operating at designed capacity, 105/ it will be necessary to construct new plants if the production target is to be reached. The reason for such a large planned increase is not entirely clear. It is unlikely that the export market is a major consideration, as Chinese aluminum, produced at high cost, could not compete in the Free World market and as Bloc demand is satisfied largely by production in the USSR and Hungary. The probable explanation is that Communist China is intent upon achieving self-sufficiency in this strategic metal in order to support a major aircraft industry and other industrial development.

The quality of nonferrous metals has been raised considerably over the past 5 years. Most of the tin metal being produced at present meets Soviet standards for first grade tin (99.6 percent purity), and

zinc of a purity of 99.97 percent was being produced in 1954. 106/ Some copper of 99.99 percent purity has been produced. 107/

8. Chemicals.

The Chinese Communists refer to the chemical industry as one of the backward industries of China. With abundant phosphate, salt, coal, and limestone deposits, China has most of the basic raw materials to support a sizable chemical industry. In the First Five Year Plan, 7 key Soviet-aid projects were assigned to this industry, including 2 nitrogen fertilizer plants, 2 modern dyestuffs plants, 2 pharmaceutical plants, and 1 calcium carbide plant. 108/ The ever-increasing demand for chemicals, especially chemical fertilizer, and the difficulties encountered by the Chinese in undertaking capital construction in this highly technical field, 109/ however, indicate an increasing reliance upon imports of chemicals during the Second Five Year Plan.

Two-thirds of state investment in the chemical industry for 1955 was earmarked for the development of fertilizer production. 110/ The announced 1962 production goal for chemical fertilizers -- 3.0 million to 3.2 million metric tons -- is more than 5 times the 1957 goal. 111/ As the First Five Year Plan provides only for construction of 3 new plants and reconstruction of 2 others, and as the Chinese Communists have stated that it takes 5 to 6 years to design and construct a chemical fertilizer plant, more chemical construction projects would have to be immediately initiated than are thus far mentioned in the plans, if the 1962 goal is to be realized. Although a part of the planned increase might be realized from expansion of byproduct production of the steel industry, the planned increase for 1962 may consist largely of phosphate, which was classified as mineral fertilizer in the First Five Year Plan. Phosphate requires little processing other than grinding the rock into granular form and possesses much less nutrient value in comparison with other chemical fertilizers. Whereas domestic production of nitrogen fertilizer is projected to approximate 1 million tons in 1962, it is expected that from 4 to 5 times that amount will have to be imported in that year, most of it coming from the Free World.

Communist China also will continue to be dependent upon large imports of rubber for many years to come. With its synthetic rubber industry still in the experimental stage and with its program for the development of rubber plantations in South China and on Hainan

Island just getting under way, it is estimated that at least 75 percent of China's rubber requirements in 1962 will be met through natural rubber imports from Southeast Asia. On the other hand, Communist China should have sufficient production capacity to satisfy most of its motor tire requirements well in advance of that date. Table 30* shows the estimated production of selected chemical and rubber products for 1950-62.

The quality of chemical and rubber products has been the target of much criticism, and special emphasis is now being placed on remedying the causes by training more competent technicians and replacing obsolescent equipment.

9. Cement.

The cement industry provides a key to Communist China's industrialization program, as it furnishes the principal ingredient for construction of industrial buildings, water conservancy projects, roads, airfields, and military fortifications. In keeping with the proposal to double capital construction investment during the period of the Second Five Year Plan, the 1962 production goal of 12.5 million to 14.5 million tons of cement is slightly more than twice the planned production figure for 1957. 112/ This goal probably will be achieved, but will only meet China's minimal cement needs.

The rapid rise in Communist China's cement production from 0.66 million tons in 1949 to 4.6 million tons in 1954 resulted from the expansion, rehabilitation, and reconstruction of existing capacity and from marked improvement in the rate of utilization of this capacity. With capacity utilization approaching the maximum rate in 1954, subsequent increases in cement production have depended on increased production capacity, partly in the form of new cement plants. 113/

In 1956 the Chinese Communists produced about 6.4 million tons of cement, exceeding the 1957 goal by 0.4 million tons. In spite of this increase, a shortage of cement hindered the construction program in 1956. This has resulted in part from a failure to gauge properly the domestic demand for cement in 1956, as the planned increase in production over 1955 was 16 percent less than the rate of increase in demand. 114/ In addition, commitments to export large quantities of cement, presumably to the USSR, have aggravated the

* Table 30 follows on p. 103.

Table 30

Communist China: Estimated Production
of Cement, Rubber Products, and Selected Chemicals
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Cement	Thousand metric tons	1,400	2,500	2,860	3,900	4,600	4,500	6,400	7,700	8,800	10,000	11,200	12,300	12,500 to 14,500
Motor vehicle tires	Thousand sets	62	225	417	488	702	597	675	760	N.A.	N.A.	N.A.	N.A.	1,500
Rubber footwear	Million pairs	45.1	67.6	61.69	69.1	76.69	88.2	100	108.3	N.A.	N.A.	N.A.	N.A.	150
Calcium carbide	Thousand metric tons	6	7	8	10	12	15	18	21	30	42	48.6	56.5	60
Synthetic ammonia	Thousand metric tons	8	21	28	40.6	51.9	62	72	86	97.5	119	125	137	151
Refined naphthalene	Thousand metric tons	0.396	0.5	0.73	0.9	1.2	1.3	1.4	1.5	1.6	1.72	1.84	1.97	2
Refined benzol	Thousand metric tons	3.04	12.9	18.85	23.7	29.8	32.8	40	43	46	49	52.3	56	60
Toluol	Thousand metric tons	0.8	2.8	4.08	5.	6.5	7.	8.	8.6	9.2	9.85	10.5	11.2	12
Crude phenol	Thousand metric tons	0.306	0.378	0.6	0.72	0.9	0.96	2.	2.14	2.39	2.5	2.62	2.8	3
Caustic soda	Thousand metric tons	20.12	49.07	79.	89.27	116.05	137	145	154	171	190	210	234	259
Sulfuric acid	Thousand metric tons	75	115	146	198	231	252	272	290	310	330	355	380	400
Soda ash	Thousand metric tons	112.4	184.6	192.	222.7	309.6	405	444	476	540	610	690	780	880
Nitric acid	Thousand metric tons	8	8.5	9.4	14.	22.	25.1	29.4	33.6	38.	46.5	48.6	53.5	59
Ammonium nitrate	Thousand metric tons	1	4.9	7.5	22	26	32	38	44	59	74	89	98	108
Ammonium sulfate	Thousand metric tons	76.8	128.5	181	226	298	324	415	504	580	702	734	806	890

shortage. 115/ The failure to plan for an adequate increase in production to meet 1956 requirements suggests that the 1962 goal may be underestimated.

Maintaining the quality of given types of cement appears to be a problem for the industry. It is reported, for example, that only three cement plants kept their product up to standard in the first half of 1954. 116/ Table 30* gives the estimated production of cement for 1950-62.

10. Light Industry.

Despite the announced intention of the Chinese Communists to allocate a greater proportion of investment to light industry, 117/ the proposals for Communist China's Second Five Year Plan indicate less emphasis on the development of light industry than was evident in the First Five Year Plan. Whereas the First Five Year Plan provides for growth in light industry of approximately 83 percent (about 80 percent of the corresponding rate for heavy industry), the production goals for 1962 reveal a planned growth for light industry of only 60 percent (less than 40 percent of the planned rate of development for heavy industry). Moreover, this increase will result primarily from expansion and renovation of existing production capacity, including the large segment of private industry recently brought into the state sector, where quick returns in expanded output are anticipated from relatively small investment. 118/ Much of this increase will originate in the coastal area of China, which accounts for some 70 percent of the total national output of light industry, 119/ and, more specifically, in Shanghai, Tientsin, and Canton.

Aside from the policy of developing heavy industry on a priority basis, the growth of light industry in China is limited by inadequate supplies of agricultural raw materials. For light industry as a whole, production increased 28 percent in 1953 following the bumper harvest of the preceding year, but in 1955 the rate of increase was only 1 percent as a result of the floods and other natural calamities experienced in the previous year. An even better example of the problem of agricultural raw materials is afforded by the cotton textile industry, which contributes nearly one-third of the total value of the output of light industry. Production of cotton yarn declined 14 percent in 1955 and increased an estimated 29 percent in 1956.** Thus

* P. 103, above.

** The Communists have recently admitted that 1956 cotton production did not reach the 1955 level.

the sizable increase of 60 to 80 percent in cotton yarn production scheduled for the Second Five Year Plan is entirely dependent upon the success encountered in the attempt to increase raw cotton production by nearly 50 percent during the plan period. In like fashion, achievement of other light industry production goals will be governed by the level of agricultural production which, as Chou En-lai has pointed out, will remain subject to "the influence of natural calamities." 120/ Table 31* shows estimated production of selected products of light industry in 1950-62.

The deterioration of quality of products of light industry is a serious problem in present-day China. Chia To-fu, Director of the Fourth Staff Office of the State Council, recently acknowledged that "the quality of many light industry products is still unsuitable, or in some cases has even become worse in the past few years." 121/ It is expected that emphasis on quantity at the expense of quality will continue to characterize light industry production in China for many years to come.

C. Transport and Telecommunications.

1. Railroads.

Transport routes in Communist China are concentrated in the eastern half of the country, converging primarily on such large economic and population centers as Mukden, Peiping, Shanghai, Hankow, and Canton. The industrial regions in the Northeast are particularly well served by internal transport routes. New route construction into western areas, formerly served largely by primitive means of transport, is being increasingly emphasized in an attempt to develop unexploited resources and increase the effectiveness of central government control.

Since the Communists gained control of the China mainland in 1949, transport service has shown marked increases in performance, so that by 1955 total traffic in terms of tons originated was 150 percent greater than in 1950. This growing performance of the transport system has been the product of a number of factors -- a growing demand for service, increasing investments, and greater operating efficiency. Outstanding among these have been the increasing requirements generated by the industrialization program, without which transport performance could not progress.

* Table 31 follows on p. 106.

Table 31

Communist China: Estimated Production of Selected Products of Light Industry
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Cotton yarn	Thousand metric tons	438	487	656	745	834	720	929	1,016	997	1,096	1,205	1,324	1,452
Cotton cloth (factory production)	Million linear meters	1,602	2,175	3,265	3,943	4,474	3,770	4,860	4,800	5,160	5,550	5,970	6,420	6,890
Wool yarn	Thousand metric tons	2.8	3.5	4.	4.7	5.5	6.6	7.4	8.3	8.7	9.1	9.6	10	11
Wool cloth	Million linear meters	2.4	2.4	3.7	4.7	5.	6.	6.7	7.5	7.9	8.3	8.7	9.1	9.6
Silk cloth	Million linear meters	23.6	29.5	38.8	44.1	47.1	62.5	77.5	77.5	83.7	90.4	97.6	105.	113.
Gunny bags	Million bags	13.	29.4	67.4	60.4	60.	53.4	60	68	71	75	79	83	87
Cigarettes	Thousand cases (50,000 cigarettes per case)	1,885	2,030	2,650	3,552	3,728	3,567	4,133	4,700	4,900	5,100	5,400	5,700	6,000
Matches	Billion boxes	5.87	7.22	9.11	8.02	10.35	11.13	11.91	12.7	13.6	14.6	15.6	16.7	17.9
Machine-made paper	Thousand metric tons	139	239	372	428	556	589	707	800	910	1,030	1,170	1,330	1,500
Newsprint	Thousand metric tons	36	41	47	61	79	120	137	154	175	195	210	230	250
Native-made paper	Thousand metric tons	N.A.	N.A.	167	N.A.	N.A.	N.A.	N.A.	237	N.A.	N.A.	N.A.	N.A.	N.A.

One of the most notable features of the Chinese Communist internal transport system is the extent to which rail services currently predominate. In terms of tons originated, the railroads' share of total traffic has risen progressively from about 50 percent of the volume carried by all forms of transport in 1937 to about 70 percent of total inland traffic in 1956.

Since the Chinese Communists have controlled China, the railroads have been the most significant interior transport connection in international trade. In 1955, well over 95 percent of the total tonnage of international trade over interior routes crossed the border by rail. Rail service is available between China and the USSR, North Korea, Kowloon (Hong Kong), and North Vietnam. Nearly 90 percent of all trade with the USSR was moved via the railroads. The Trans-Mongolian railroad, opened to traffic during January 1956, will provide means for an appreciable increase in the capacity of transport supporting China's foreign commerce through Siberia. It is estimated that in 1955 rail connections with the USSR handled about 5 million tons of freight. About 90 percent of this was in trade with the USSR, the remainder in trade with the European Satellites.

The pattern of transport between China and North Vietnam was changed in late 1955 by the completion and official opening of the Hanoi-Nam Quan line linking the North Vietnam rail system with that of China. This line became the principal transport route for conveying the increasing volume of aid to North Vietnam, which in 1955 amounted to about 60,000 tons. The Chinese are presently working on the Hanoi-Kunming line, which will be used primarily to facilitate the export of Yunnan mineral resources through the ocean terminal at Haiphong.

Chinese domestic rail operations consist largely of the movement of a few bulk commodities from a relatively small number of places of origin to a few principal destinations. Transport of coal, the largest single item shipped, made up more than 30 percent of the total rail performance during 1954, whereas agricultural products and construction materials each made up more than 20 percent, and transport of ores and semiprocessed metals made up about 5 percent. 122/ As the level of the economy rises, shipments of machinery, chemicals, and other manufactures are becoming of increasing importance. Petroleum is still a minor item in transit. Table 32* shows the estimated volume and performance of transportation in Communist China in 1950-62.

* Table 32 follows on p. 108.

Table 32

Communist China: Estimated Volume and Performance of Transportation
1950-62

Industry	Unit	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Freight originated														
Railroads	Million metric tons	99.5	110.5	132.1	160.4	192.6	193.4	246	257	281	305	329	352	376
Inland waterways (excluding junks)	Million metric tons	4.50	6.90	9.41	15.3	20.5	26.3	42.7	48.4	54.1	60.1	65.0	70.8	75.8
Coastal waterways (excluding junks)	Million metric tons	0.828	3.30	5.76	5.92	9.91	10.5	13.7	15.8	17.8	19.9	22.0	24.0	26.2
Motor vehicles	Million metric tons	7.45	12.6	20.7	30.4	43.5	50.1	58.1	67.5	81.0	97.2	117	140	168
Total	Million metric tons	112	133	168	212	267	280	360	389	434	482	533	587	646
Performance														
Railroads	Billion ton-kilometers	39.4	51.5	60.2	78.1	93.2	98.1	120	130	143	156	169	182	196
Inland waterways (excluding junks)	Billion ton-kilometers	1.68	2.66	3.64	5.63	7.89	10.4	17.1	19.6	22.2	24.9	27.3	30.0	32.5
Coastal waterways (excluding junks)	Billion ton-kilometers	0.822	2.91	5.00	4.65	8.04	8.38	11.0	12.6	14.2	15.9	17.6	19.2	21.0
Motor vehicles	Billion ton-kilometers	0.373	0.503	0.678	1.18	1.87	2.52	2.84	3.21	3.85	4.62	5.55	6.66	7.99
Total	Billion ton-kilometers	42.3	57.6	69.5	89.6	111	119	151	165	183	201	219	238	257

Between 1950 and 1954, rail traffic, in terms of tons originated, almost doubled, and in 1954 it was about 40 percent above the pre-Communist peak year of 1945. Growth in the volume of rail traffic has generally been consistent with the growing needs of the economy. Figure 2* shows indexes of growth in selected major economic sectors as well as gross national product, which are a fairly representative measure of economic activity. It is shown that the trends in these indicators have paralleled the trends in tons originated on the railroads during the same period. This correlation reflects the fact that the increased demand from the production of goods and services both supported and made necessary the growth of rail transport.

The present high level of rail performance has resulted from a number of various factors. The railroads, now operating on a national scale, have developed an effective centralized, but flexible, administration which has permitted intensive exploitation of the rail system. High traffic levels have been attained through an intensive utilization of existing facilities and equipment. Particular emphasis has been placed on decreasing freight car turnaround time and increasing the load per car. 123/ It is estimated that between 1950 and 1953, turnaround time was reduced from an estimated 4.7 to 4.0 days, where it apparently has leveled off. Reductions in turnaround time are not likely to continue, as new lines extended into remote areas will tend to offset gains elsewhere. By 1954 the average load per car had reached 31.6 tons, an increase of 3.3 tons over the 1952 figure. Recent announcements indicate that the net weight per car load is to increase to 34.7 tons by the end of 1957. The rise in average load per car may be attributed to the increasing proportion of 40- and 50-ton cars as well as to the considerable volume of heavy loading freight currently moving. Any continued increases will probably result from increases in the capacity of cars rather than from improved methods of loading. Efforts are presently being directed toward increasing the load factor of locomotives by increasing the average gross freight train weight.

Sizable additions have been made to the rolling stock inventory by production of new units. 124/ Since 1953, Chinese freight car production has been made up of 50-ton cars (except for a limited number of 30-ton refrigerator cars) rather than the 30-ton car formerly produced. This, of course, means that the actual freight-carrying capacity has increased substantially more than the increases in number of cars would indicate.

* Following p. 110.

As a result of increased utilization of facilities and equipment and of increases in the freight car inventory, limitations which had been imposed on rail operations by the availability of rolling stock are believed to have been largely overcome. As traffic has continued to increase, however, limitations on further growth in the number of trains are being imposed by available track capacity in certain areas. Since 1954 there have been indications that the railroads have been operating under an increasing strain and have not been improved at the same rate as the increase in traffic they have been obliged to carry. Along certain key sectors of line, traffic capacity and traffic volume were becoming almost identical. A net general transport shortage does not exist as yet, but local rail congestion and local inability to handle requirements can be expected. During 1956, references to congestion and lack of adequate transportation have increased. An official of the central transport planning staff stressed the point that the volume of freight transport requirements in 1956 would approach or exceed the level originally planned under the Five Year Plan for transport in 1957. 125/ Most of the recent trouble has been reported on sections of such key rail lines as the Peiping-Hankow, the Lung-hai, and the Shih-men - Tai-yuan railroads. The campaign to move heavier trains appears to be an attempt to alleviate this situation in part. It is doubtful, however, that the over-all effect of heavier train movements will be adequate to solve the problem, and there have already been examples of traffic congestion in spite of it. If the basic problem is to be rectified, additional investment in track and facilities on existing lines appears necessary. Double tracking of main trunklines, increasing the capacity of key rail junctions and yards, increasing the capacity of lines, and installation of automatic signalling systems on certain main lines are to be emphasized in the Second Five Year Plan.

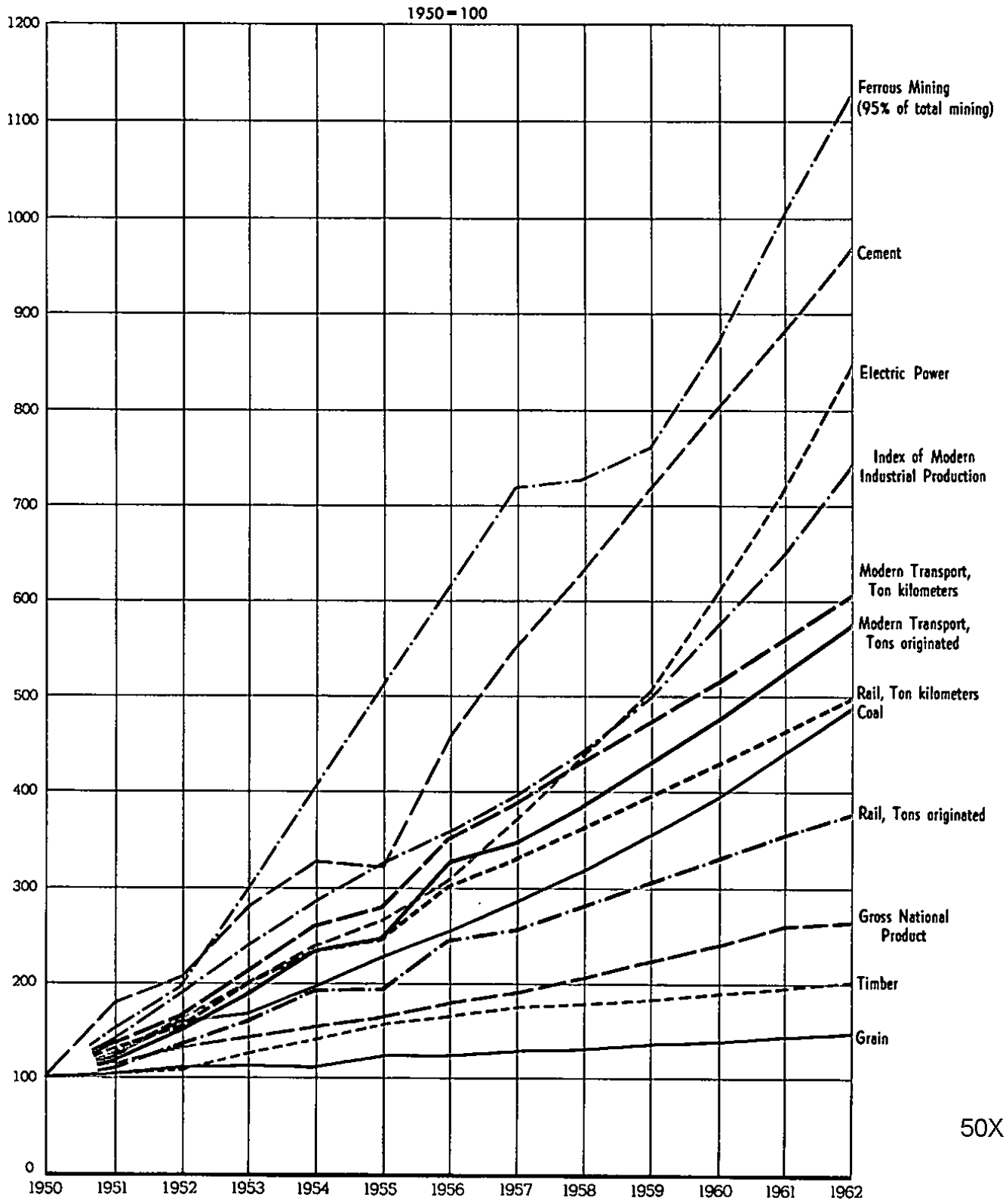
During the past 6 years the Chinese Communists have carried on a most impressive rail construction program. The task of building a rail system to meet the growing requirements of the existing industrial sector and to service the areas into which Chinese industry and mining are expanding is a monumental one, however, and apparently improvements have not been sufficient to cope with the increases in traffic generated. By the end of 1956 the Chinese had constructed over 5,000 kilometers of new line, giving them an operable track network of about 29,000 kilometers. About 45 percent of rail investment in the Five Year Plan has been allocated for new lines. A major part of the new construction has been concentrated in the western areas of China, remote from major centers of economic activity. Extension of the rail

50X1

Figure 2

COMMUNIST CHINA

INDEXES OF GROWTH OF SELECTED ECONOMIC SECTORS, 1950-62



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system into these areas hitherto inadequately served by modern transport apparently has been designed to enable the Chinese to exploit undeveloped mineral resources; to establish an efficient transport service to support planned industrial centers, power developments, and agricultural stations; and, to a lesser extent, to provide for more effective political control over greater areas of population. Construction of the line westward from Lan-chou, via Yumen and Urumchi, to connect with the Soviet system near Aktogay and the projected line into the Tsaidam Basin are prime examples of this effort. Work is also under way on various sections of track which will provide an additional north-south trunkline parallel and 250 kilometers west of the Peiping-Hankow-Canton line. This line, which will pass through Paotou, Lan-chou, Chengtu, Chungking, and Kunming, will ultimately provide a Chinese inner belt line linking North Vietnam and the USSR.

Other new line construction has apparently been undertaken with the intention of increasing military logistic capabilities in certain strategic areas. Such lines as the Litang-Fort Bayard and the Yingtan-Amoy are examples of this effort.

In addition to trunkline construction, forestry railroads are being extended and numerous branch lines are being constructed to service new or enlarged industrial and mining installations and to exploit sources of construction materials.

A great deal of attention has also been directed toward strengthening the existing rail system. Nearly one-third of rail investment under the First Five Year Plan has been allocated for rehabilitation of existing lines, construction or restoration of double tracks, development of additional yard and handling facilities, and installation of communications equipment.

In order for the rail system to continue to grow concurrently with the economy as a whole, a relatively large investment for improvement of the system's capacity, for extension of the system, and for increases in the locomotive and freight car inventory will have to be continued. The economy will have to generate a large measure of the resources required for this expansion, and a failure to do so will impair the growth of the over-all economy, more particularly the growth of the modern industrial sector.

2. Motor Vehicle Transport.

Motor transport in Communist China is employed chiefly for short-distance intercity freight movement. The average length of haul is still only about 40 kilometers, and the generally primitive quality of the road system hinders the growth of motor transport. In the north and central sections of the country, where the road network is fairly dense although in poor condition, motor transport acts mainly as a feeder to railroads and rivers, whereas in the northeast, main roads parallel rail lines and provide complementary service. Motor transport has facilitated the growth of commercial centers in rural areas not served directly by rail or water, and new feeder roads, joining scattered farming communities to the established transport network, enable marketing of commodities by vehicle that previously were dependent upon coolie or animal carriers. Demand for motor transport has also been increased with the centralization of grain procurement and distribution under state control. In spite of appreciable increases in motor transport, however, the volume of goods moved by truck is relatively small; animal and coolie transport probably still haul as much tonnage as motor trucks if not more. Table 32* presents performance of motor vehicles.

The Chinese have made considerable progress in the construction of new highways. From a road network of 78,000 kilometers in 1950, motorable highways were extended to 180,000 kilometers by the latter part of 1956, mainly by projected new motorable roads into areas formerly served only by coolie and animal transport. 126/ Low standards of construction will continue to keep the efficiency of Chinese highway transport at a low level. Presently, the greater part of the road net is not capable of supporting truck traffic throughout the year.

A major emphasis has been placed on the extension of the highway network to the border areas where only primitive means of communication formerly existed. Construction of roads in these areas has assisted the economic and cultural development of the racial minority districts and has tied them more closely to the central government. Truck transport in the western oilfields has been of prime importance. Roads provide the only means of direct transportation between Communist China and Tibet and between Communist China and the neighboring countries of Laos, Burma, India, and the Soviet Central Asian republics. Because of Communist China's policy of strengthening

* P. 108, above.

her southwestern border positions, roads in this area have received considerable expansion.

In addition to increasing and modernizing the motor road network, the Chinese have also been investing heavily in their motor vehicle park. Mainly as a result of large imports of vehicles from the Soviet Bloc, the park increased from about 40,000 units in 1950 to about 80,000 units by the end of 1955. Continued import of vehicles, coupled with domestic manufacture beginning in 1956, is expected to bring the total park to more than 150,000 units by the end of 1960.

3. Inland Waterways.

The inland waterways system of Communist China is one of the most extensive in the world. Approximately 100,000 kilometers of routes are now open to navigation although most are suitable only for shallow draft vessels. The heaviest volumes of traffic are carried on the Yangtze system, the West River in the South, and the Sungari system in the Northeast. In spite of the great length of such main routes as the Yangtze, inland water transport is essentially local in nature; in 1954 the average length of haul of the modern water transport sector (excluding native craft) was only 385 kilometers. The transport of agricultural produce, coal, and building materials is most important on the inland waterways, but as the level of the economy rises, movement of industrial raw materials and produce is becoming relatively more important.

The increased emphasis on rail transport has reduced the relative importance of water transport, and river traffic still has not approached pre-Communist levels. Inland water operations have steadily improved under the Communists, however, and waterway freight movement in 1955, in terms of ton-kilometers, was about six times that of 1950, as shown in Table 32.* Because of the recent strain on rail transport, some bulk cargoes planned for rail shipments have been diverted to water. With the continuation of the present emphasis placed on water transport, the achievement of further development plans now under way should bring performance close to pre-Communist levels by 1960. Nevertheless, with the constantly growing role of the railroads, the relative share of freignt tons originated on inland water transport will probably never be as great in proportion to total freight tons originated as it was in the past.

* P. 108, above.

The self-propelled fleet, for the most part confined to the main arteries, is estimated to total only about 750 vessels, ranging from 4,000-ton passenger-cargo vessels to smaller tugs and steam launches. Efficiency in operations has been increased under the Communists. Socialization of almost all vessels operating over the waterways and centralization of dispatch control and cargo allocation have probably aided efficiency. Voyage time for vessels operating on scheduled runs has been reduced, in some instances from one-third to one-half. On the Yangtze, routing of barges through the entire voyage, instead of transshipping the cargo several times, has improved transit of bulk cargoes. Within the last year, overall efficiency of transport service has been helped by the establishment of through services from the Yangtze to ports along the east coast.

The nonpowered fleet consists of a large number of small junks and native craft, which in the aggregate have a freight capacity of nearly 4 million tons and which in 1953 accounted for about 46 percent of total inland water transport. 127/ On major waterways, such as the main stream of the Yangtze and the Sungari, tug-barge units are replacing the junk to some extent, especially on long-haul routes. On river inlets, canals, lakes, and tributary streams, however, the shallow draft junk is still supreme. More than 80 percent of China's junks operate in the Yangtze basin, along the Huai and Han Rivers, through the Poyang and Tung-ting Lake areas, and among the numerous canals. Throughout the Yangtze basin and along the Pearl River system in south China, the junk is the primary means of contact between market centers and the countryside. The junk operates largely in support of the Chinese agricultural economy and is essential in the role of collecting grain and other agricultural produce and in local distribution. In addition, junks have been used in large numbers to move literally millions of tons of dirt and fill in support of various construction programs, such as water conservancy projects. There is some doubt that the Chinese know how much traffic is actually moved by junks; announcements about junk traffic tend to be vague and are inconsistent. The statistics shown in Table 32, based on Chinese announcements, do not include junk traffic. It is estimated, however, that in 1955 junks possibly carried about 22 million tons of traffic in support of the general economy and, depending on the extent that essentially local haul traffic is also included, could possibly have carried more than 100 million tons.

Investment in inland waterways has greatly increased during the past several years, largely because of construction of new self-propelled ships and barges. Before 1954, relatively little investment went into new vessels, most of it going to salvaging vessels, rehabilitating the existing fleet and purchasing secondhand craft. Since 1954, emphasis has been on new construction. Relative investment for channel improvement and similar projects is small, but appropriations for construction projects have increased several times yearly and are especially important on the local level.

4. Coastal Shipping and International Seaborne Commerce.

Operations of the Chinese Communist merchant fleet are generally confined to serving the domestic coastal trade; recently there has been an insignificant amount of commerce carried to North Vietnam. Chinese Nationalist interdiction of coastal shipping has diminished and at present is effective only in the Taiwan Straits area, especially around the port of Amoy. To the north of Taiwan, the Chinese Communists operate unobstructed trunk and feeder passenger and freight routes servicing all coastal ports north from Foochow. The largest segment of the Chinese fleet is concentrated in this area; shipment of coal, grains, and other agricultural products; petroleum products; and industrial goods comprise the bulk of traffic. A smaller segment of the fleet operates out of Canton in South China to Swatow and to ports in the Liuchow Peninsula - Hainan Island area, providing local support for military and economic activities.

Apparently the available fleet has been able to handle almost all tonnage requirements. Coastal shipping performance has grown steadily; ton-kilometer performance in 1955 was 10 times the 1950 figure, as shown in Table 32.* Continuing efforts to increase the utilization and efficiency of the coastal fleet have enabled it to cope with the growing demands for service, and some slack in fleet operations may still exist.

Between 1950 and mid-1955, with salvage efforts, foreign purchases, and new construction the Chinese Communist merchant fleet increased from about 79 vessels of 175,000 gross registered tons (GRT) to about 120 vessels of 295,000 GRT. There has been little construction of coastal freighters in Chinese shipyards, almost all production going into inland waterways vessels and barges and recently into naval

* P. 108, above.

craft. Within the last year, the Chinese Communists have stepped up their foreign purchase program and presently have orders with Finland, Poland, and Hungary for new coastal-type vessels. It is estimated that by 1960 the Chinese Communists could have a coastal fleet of 350,000 to 400,000 GRT. This would still be less than half the size of Nationalist China's merchant fleet in 1949.

The powered merchant fleet is considerably augmented by a large number of coastal trading junks which handle the bulk of local service operations. In addition, domestic coastal service has been augmented to a limited extent by foreign-flag vessels. Since mid-1955, however, coincident with stepped up Nationalist interference with foreign-flag vessels, almost all vessels formerly active in Chinese Communist domestic service have been withdrawn. Presently, foreign-flag vessels operate on line service between Hong Kong and Swatow and between Hong Kong and various North China ports, but there have been only a few reports of these vessels calling point to point in Chinese Communist domestic trade. There have been no recent reports of Bloc ships aiding in Chinese Communist domestic commerce.

The Chinese Communists are completely dependent upon foreign registered vessels, both Bloc and Free World, to handle longer international trade. It is believed, however, that about half of the 23 Polish ships on the Baltic-China run, having been purchased by Poland actually for Chinese Communist use, may be effectively owned by the Chinese Communists.

In 1955 there was a continuing substantial increase in the amount of merchant shipping engaged in trade with Communist China. Seaborne commerce in 1955 carried less than 10 percent of the tonnage of Communist China's trade with the USSR but carried over 95 percent of European Satellite trade tonnage and nearly all of the non-Bloc trade tonnage. 128/ Seaborne imports comprised primarily such bulk commodities as fertilizer, cotton, and rubber from the Free World, and in addition iron and steel products, industrial machinery, transport equipment, and the like from the European Satellites. Direct imports of POL by sea decreased in 1955. Sizable increases in POL shipments to the Soviet Far East, however, indicate that much POL tonnage was probably unloaded there and transshipped overland to Communist China. Exported seaborne tonnage consisted of agricultural and industrial raw materials, such as salt, soybeans, other oilseeds, rice, nonferrous metals and ores, iron ore, and the like. Non-Bloc

vessels provided 81 percent of the tonnage arrivals in 1955 in chartered tramp and scheduled liner services. Whereas chartered shipping carries the bulk of the cargo, liner services are of more importance than the volume of cargo carried might suggest because they provide regularity of shipment and enable the Chinese Communists to engage space and move smaller lots of import and export cargoes promptly, without having to wait for charter arrangements. Non-Bloc vessels are extremely important in meeting Chinese Communist seaborne transport requirements, as the combined fleets of the Soviet Bloc are not able to meet adequately the over-all transportation requirements of the Bloc.

5. Air.

Air transport in Communist China as yet plays a very limited role in freight movement, but it is important in the movement of high-value, low-tonnage cargo and for high-priority-personnel transport. The acquisition of new aircraft of greater capacity and better performance and the adoption of international standards and operating procedures will undoubtedly increase the importance of civil aviation in the economy. During 1955 and early 1956 the unduplicated basic civil air network increased more than 21 percent from the 1954 figure of 15,700 km to over 19,000 km and route exploration was carried out on several additional routes including Peiping to Lhasa. During the first half of 1956 the total volume of air transport had increased by nearly 75 percent over the same period of 1955. New routes have been opened from Canton to Hanoi in North Vietnam, from Kunming to Mandalay and Rangoon in Burma, from Urumchi to Khotan, and from Fort Bayard to Hoihow on Hainan Island.

The inventory of the Chinese civil air fleet has undergone an almost complete changeover in type of aircraft. The American-built aircraft which had formed the nucleus of the inventory used on the domestic network have been replaced by new Soviet aircraft -- IL-12's, IL-14's, and Li-2's. In December 1956 the TU-104, a Soviet jet transport, began scheduled services on a route from Prague to Moscow to Peiping. It is probable that the Chinese civil air fleet will receive jet aircraft in the near future to fly the Moscow-Peiping route which it shares with Aeroflot, the Soviet carrier.

6. Telecommunications.

Postal and telecommunications services in Communist China as yet do not have the capability of meeting concurrently economic, political, social, and military requirements. The Chinese are attempting to overcome this inadequacy, but because of the narrow communications base and the size of the problem of increasing system capacity, telecommunications services may not be able to keep abreast of the growing economy. Organizational changes during 1955 in the Ministry of Posts and Telecommunications and emphasis on technical training should improve the efficiency of operations.

Growth of postal facilities has paralleled growth in agricultural cooperatives, and it is estimated that the volume of mail in 1962 will increase about 500 percent over 1955. Newspapers and periodicals still account for 90 percent of mail volume.

Domestic telephone service is expected to reach all communities by 1962, and the telegraph system is continuing to grow. Wirelines are the primary telecommunications medium with point-to-point radio used as a supplementary medium.

D. Domestic Trade.

Table 33* gives absolute figures for the value of retail sales for 1950 and 1952-55 which are available in Communist statistics, together with absolute figures for planned retail sales in 1956, 1957, and 1962. The average increase from 1950 to 1954 is about 15 percent. This rate of increase reflects the general recovery of both agriculture and light industry in the period from 1950 to 1952. It also reflects large increases in wage income for industry, transportation, construction, and government. The increase in 1955, however, was only 2 percent as a result of the poor year following the 1954 floods. Table 34** shows the breakdown of retail sales for 1952-54 between rural and urban retail sales. Trends in wages of office and factory workers are used to estimate the 1955 proportion and make rough estimates for 1957 and 1962. Estimates of retail sales to the nonagricultural rural population are included based on estimated income of the nonagricultural rural population and on the estimates of farm cash income in Table 35.***

* Table 33 follows on p. 120.
** Table 34 follows on p. 121.
*** Table 35 follows on p. 121.

Table 35 shows the estimated relation of net farm income and disposable cash income in the years 1953 and 1954 for which we have direct information from an article on the proportion of the total value of agricultural output marketed, and estimates for the years 1950-52 and 1955. For the years 1957 and 1962 the estimate of cash income is based on estimated trends in cash sales by peasants based on estimates of meat production, production of industrial crops, and cash sales of other crops. This index shows a level of cash income for 1957 and 1962 in 1955 prices that is well below the expected level of farm retail sales figures based on a breakdown of the figure for total retail sales in 1957 and 1962.

The discrepancy highlights an important problem. Retail sales (in 1955 prices) to farmers will increase as farm income rises at a slower rate than is probably provided for in the Second Five Year Plan. In 1955, state trading companies were already experiencing difficulty in meeting their quotas for rural sales, and much was said about the impact of socialization on farm supplementary income affecting the cash income available for purchase of industrial consumer goods. The effect of socialization on normal means by which farmers supplemented their cash income was only one of the factors involved. Meat production in 1955 was seriously affected by excessive slaughtering in 1954 due to the grain shortage. Light industry production had expanded rapidly at the expense of quality and trading companies were overstocked with commodities of poor quality that could not be marketed. Finally, the drive to increase the purchase of fertilizer, farm tools, and other production materials made serious inroads on farm cash income available for purchase of consumer goods. This situation by which farm cash income was not sufficient to maintain demand for available consumer goods accounts for two developments that have taken place. In the first place, loans made to peasants increased by 2.6 billion yuan in 1956 to a total level of 3.6 billion yuan. In the second place, planning announcements have shown the intention to raise the prices of oilseeds, industrial crops, and livestock, which will stimulate their greater production and at the same time increase farm cash income. This admittedly will reduce state income from trade in these products but will help to solve the problem of increasing farm cash purchasing power. This situation -- in which farm cash income is not likely to rise sufficiently to meet retail sales figures -- also affects the increased purchase of fertilizer and other production materials needed to increase production.*

* Continued on p. 122.

Table 33

Communist China: Retail Trade a/
1950-57 and 1962

Billion Yuan

Retail Outlets	1950	1951	1952	1953	1954	1955	1956 Plan	1957 Plan b/	1962 Plan
State-operated	1.331	2.39	4.384	5.941	7.611	10.785	27.83	10.22	N.A.
Supply and marketing cooperatives c/	.819	1.75	5.051	8.519	14.901	12.211		17.15	N.A.
State-capitalist d/	.031	.05	.077	.152	1.827	5.065	11.73	11.95	N.A.
Private	14.613	17.61	18.153	20.429	14.623	11.941	6.44	10.51	N.A. f/
Total	16.794	21.80 g/	27.665	35.041	38.962	40.002	46.00 h/	49.83 (Plan)	74.75 (Plan)
Value in 1952 prices i/	20.410	22.71	27.665	33.030	36.480	37.280	42.87	46.44	69.66

a. Figures taken from statistical data, unless otherwise noted. 129/
b. 130/
c. Figures for supply and marketing cooperatives include a negligible amount of trade going through consumer cooperatives.
d. State-capitalist units include public-private businesses, such as transformed urban stores and former private vendors now serving as state commission agents.
e. Because of the speedup in socialization of domestic trade in the winter of 1955-56, a much greater part of private trade will have been transformed to public-private status than was envisaged in the First Five Year Plan. This figure will probably turn out to less than 5.0 billion yuan.
f. 131/
g. 132/
h. 133/
i. A retail price index is secured for 1950 and 1953-55 from figures on average money wages and real income. 134/ The price index for 1951 is based on trends in production of commodities against unit sales in the Five Year Plan.

Table 34

Communist China: Rural and Urban Retail Sales in Current Prices
1952-55, 1957, and 1962

Billion Yuan

	1952		1953		1954		1955		1957 a/		1962 a/	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Urban retail sales	12.25	44	16.07	46	16.94	43	18.76 a/	47	19.60 a/	39	32.30 a/	43
Rural retail sales	15.42	56	18.97	54	22.02	57	21.24	53	30.20	61	42.45	57
Total retail sales	27.66	100	35.04	100	38.96	100	40.00	100	49.80	100	74.75	100

a. In 1955 prices.

Table 35

Communist China: Relation of Net Farm Income and Disposable Cash Income in Current Prices
1950-55, 1957, and 1962

Billion Yuan

	1950	1951	1952	1953	1954	1955	1957 a/	1962 a/
Farm income	23.4	28.8	32.9	35.5	35.1	39.0	41.2	49.3
Cash income after taxes	8.3	10.1	12.0	13.5	16.2	16.2	18.3	24.7
Percent of total income of cash income after taxes	35	35	36	38	46	42	44	50

a. In 1955 prices.

It is likely that large government loans to agriculture will continue to be needed over the period from 1956 to 1962.

The small rise in total retail sales for 1955 of almost 3 percent over 1954 was not occasioned simply by shortages of light industry production resulting from the poor cotton and tobacco crops in 1954. Indications are that cigarette production targeted for 1957 was in excess of demand. Large stocks of cloth were probably on hand in 1955 to carry over the period of a drop in textile production. The large increases in demand for cotton cloth and other staple items, which occurred in the period from 1950 to 1954, are not likely to continue over the next 7 years. Production of higher quality consumer goods and a greater range and variety of products is probably required if the increases targeted for retail sales are to be met. Toward this end a step has been taken toward freeing about 25 percent of the total retail sales volume from state trading controls and from price controls. This step toward a freer market in these goods and greater control over the standards of production for staple commodities of light industry are indications that this problem may be solved. The sharp rise in money wages for office and factory workers in 1956 is also in part a reaction to the poor showing in 1955 by state and cooperative trading organs.

Considerable discussion has been devoted in Communist planning utterances on the food situation, but the picture is far from clear. Confusion is introduced by the difference between calendar year statements and statements on the basis of the crop year. A statement on total marketed output of basic food crops is available for 1950-55 and serves as the basis for the figures given in Table 35 135/ for those years. Indexes for 1950-55 for sales of basic food crops can be secured from published statements and the State Statistical Bureau Reports for 1952-55, but the absolute figures must be derived from general discussions on the proportions of grain sold by the state in 1952.

The general picture that emerges for 1950-55 is as follows: In 1950 and 1951, taxes and state purchases, although not monopolizing total sales of marketed output, furnished a comfortable relation to demand for basic food crops. By late 1952 a situation emerged in which the demands for basic food crops, as the result of development in the nonagricultural sectors, outran state supplies for normal purchasing practices plus the grain tax. By late 1953 the forced purchase program was undertaken to guarantee the necessary supplies of basic food crops,

and since then the state has monopolized all procurement and sales of the surplus over farm home consumption and has determined the amount of grain to be marketed and to be left in farm areas. The 1954-55 grain year was characterized by an abnormal jump in rural retail sales to cover redistribution of food crops for farm deficient areas due to the serious floods in 1954. In the First Five Year Plan, this redistribution process in rural areas was considered abnormal and to be met by taking payments of the grain tax in money and by moving into commercial channels only that grain which would not in turn need to be sold back to the peasants. This move was taken partly to counter peasant resentment and partly to reduce the strain on the transportation and trading system that such resales required. The 1957 retail sales target for basic food crops was set in the First Five Year Plan at 29.75 million tons. The final figures for 1955, however, show only a 2-percent reduction in state sales, which is far short of the reduction that would be required if 1957 retail sales were to drop to the level called for in the First Five Year Plan. In all likelihood the actual level of retail sales will be on the order of 36 million tons as shown in Table 36* -- well over the original retail sales target for 1957.

The probable level in 1962 of the marketed portion of available supplies of grain can only be roughly indicated. The Second Five Year Plan agricultural targets would give by 1962 about 180 million tons of commercial grain after deductions for seed, feed, and waste -- a production that would furnish 23.5 million tons over and above the expected available supply in 1962, and the increase in available grain would be double the increase of 21.7 million tons which is actually likely to be achieved during the period of the Second Five Year Plan. The Communist targets would mean that food consumption would rise roughly in proportion to personal income. It is clear, therefore, that the situation with respect to supply of basic food crops will be tight throughout the period of the Second Five Year Plan. How the available supply will be apportioned depends to a large extent on Communist policy decisions as to how the pressure of rising income on food supplies will be met. Considerable flexibility in meeting the situation is possible through changes in relative prices and by direct rationing and other control measures.

The projected levels for 1962 given in Table 36 are based on increases in retail sales and nontrade uses that are roughly half of

* Table 36 follows on p. 124.

Table 36

Communist China: Disposition of Basic Food Crops a/
1950-55, 1957, and 1962

Million Metric Tons

	1950	1951	1952	1953	1954	1955	1957	1962
Total production after deducting for seed, feed, and waste	107.4	110.3	117.8	119.6	118.2	129.7	134.8	156.5
Nonmarketed portion	82.6	80.7	88.1	77.9	74.1	86.1	89.4	98.5
Marketed portion	24.8	29.6	29.7	41.7	44.1	43.6	45.4	58.0
State procurement								
Tax	15.6	20.6	19.4	17.6	19.0	19.0	21.0	25.0
Purchase	3.4	6.8	10.3	21.4	25.1	22.7	24.4	33.0
Nonstate purchase and unaccounted for procurement	5.8	2.2	0	2.7	0	1.9	0	0
Sales								
State sales	4.9	10.8	20.5	28.6	36.1	35.4	36.0	44.8
Total retail sales	19.4	21.0	26.25	31.3	36.1	35.4	36.0	
Urban	N.A.	N.A.	16.25	N.A.	18.1	19.0	20.0	25.6
Rural	N.A.	N.A.	10.00	N.A.	18.0	16.4	16.0	19.2
Disposition of tax grain								
Retail channels	10.2	12.0	15.95	7.2	11.0	10.8	11.6	11.8
Exports	1.4	1.5	1.6	1.6	1.8	1.8	2.0	2.2
Nontrade channels	1.4	2.1	2.8	3.4	3.7	4.0	5.0	6.4
Changes in stocks and grain unaccounted for	2.6	5.0	-0.95	5.4	2.5	2.4	2.4	3.8

a. Commercial grain estimated at 86 percent of unprocessed grain.

the expected increase in personal income for the groups concerned. This projection for 1962 is not likely to overstate the marketed portion, which may actually be higher. If the demands of the non-agricultural population cannot be held down to these increases in cash sales, the farm population will have to bear the difference in reduced consumption.

E. Gross National Product.

1. Size of Gross National Product, 1955.

In 1955 -- the midpoint of Communist China's First Five Year Plan -- gross national product (GNP) in current prices was almost 90 billion yuan. This output, converted at the current exchange rate, is about $36 billion, a per capita product of about $60. A detailed comparison of Chinese and US prices, however, indicates that the value of Chinese production of goods and services if valued in US prices would be almost $90 billion, or a per capita product in US prices of about $150. Chinese production, however, is concentrated in relatively few consumption items and heavy industry is small and limited in technology. High Chinese prices for a large range of goods in ample supply in the US show a ratio in Chinese prices between Chinese and US GNP of 3.56 yuan to 1 dollar, well below the yuan value at the exchange rate of 2.46 to 1. Therefore, 90 billion yuan expended for the full range of US goods and services would be worth only about $25 billion. Even the highest conversion rate based on a direct dollar valuation of Chinese output shows a very low standard of living in which the pressure of population on agricultural resources and a lack of capital have resulted in an extremely low level of labor productivity.

2. Trends in Gross National Product, 1950-57.

Tables 37* and 38** give two indexes of GNP from 1950 through 1957, the last year of the First Five Year Plan (1953-57). Estimates through 1955 are based on actual reports of performance and are much more reliable than preliminary figures for 1956 or projected output for 1957. The two indexes give a consistent picture of trends in China's GNP although they have been estimated to a considerable extent by different methods. In 1950 -- the first full year of complete Communist control over the economy -- China's***

* Table 37 follows on p. 126.
** Table 38 follows on p. 127.
*** Continued on p. 128.

Table 37

Communist China: Sector Indexes for the Gross National Product at Factor Cost in 1955 Constant Prices 1950-62 a/

Sector of Origin	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Agriculture, forestry, fishing, and rural subsidiaries	87	92	100	99	99	107	110	114	117	121	125	128	134
Industry	53	74	100	125	150	158	186	205	226	256	294	330	375
Modern transportation and communications	69	85	100	129	158	172	193	222	250	277	305	338	373
Trade (including native transportation and miscellaneous business services)	63	80	100	120	137	141	158	170	184	201	220	237	258
Construction	49	87	100	136	161	157	215	224	260	301	350	405	472
Government	82	89	100	105	111	116	122	128	134	142	152	158	165
Miscellaneous services and rent													
Rural	90	92	100	99	98	105	105	110	115	118	120	125	130
Urban	64	73	100	118	126	131	142	148	162	177	193	211	231
GNP (at factor cost)	76	86	100	109	117	125	136	144	154	166	180	193	211
Percent increase over previous year		14	17	9	7	6	9	6	7	8	9	7	9

a. Prices for 1950-57 are estimates; those for 1958-62 are proposed.

Table 38

Communist China: Gross National Product, by End Use
1950-62

Billion Yuan at 1955 Prices

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Consumption	41.6	46.6	54.1	57.2	60.1	64.2	68.5	72.9	77.8	82.8	88.2	94.0	100.1
Government purchases	6.8	9.5	8.4	9.7	9.8	10.4	10.2	10.7	11.2	11.8	12.6	13.0	13.4
Net foreign investment	-0.1	-0.7	-0.6	-1.4	-1.0	-1.2	-0.1	+0.0	+0.1	+0.2	+0.2	+0.3	+0.3
Domestic investment	3.9	6.9	10.0	13.1	17.0	17.5	19.9	19.9	23.2	25.0	29.8	33.8	38.4
Total GNP at 1955 market prices	52.2	62.3	71.9	78.6	85.9	90.9	98.5	103.5	112.3 a/	119.8 a/	130.8 a/	141.1 a/	152.2 a/
Index by end use at market prices	73	87	100	109	119	126	137	144	156 a/	167 a/	182 a/	196 a/	212 a/
Annual increase in GNP estimated by end use		19	15	9	9	6	8	5	6	7	9	8	8
Estimate of GNP a/									109.6	116.1	126.3	136.0	146.4
Index									150	161	176	189	204
Percent of annual increase									6	6	9	8	8

a. Based on a reduction in investment of 15 percent below that proposed in the Second Five Year Plan.

GNP stood at slightly less than the level of 1936 output. Agriculture and trade were slightly below the 1936 level despite the long period intervening; industry, modern transportation, and construction were roughly the 1936 level for these sectors; and the government sector was probably double that of 1936 due to the size of the Communist military and administrative establishment. The average annual increase in GNP from 1950 to 1952 was 13 to 14 percent, reflecting the unification of the country, recovery of agricultural output, restoration of industrial output, particularly heavy industry, and mobilization of an under-employed labor force by the government for its administrative, military, and investment programs. These same factors operated in favor of a high rate of increase for the nonagricultural sectors during 1953 and 1954, although agricultural production did not increase and actually declined in 1954. During the period of the First Five Year Plan, GNP at factor prices is increasing at an average annual rate of nearly 8 percent. A rate of growth of 7 to 8 percent for China implies considerable success for the Communist economic program. This rate is twice as fast as the average annual rate achieved by India during 1951-55 during its First Five Year Plan. It is slightly higher than the rate of 7 percent for the USSR from 1950 to 1955 and two and a half times the 3 percent rate for the US GNP for these years. On the other hand, Japan -- which had also not achieved its 1936 level in 1950 -- has increased its total output from 1950 to 1955 by a little less than 10 percent a year, only slightly lower than the rate of 10 percent achieved for Communist China for 1950 to 1955.

3. Trends in Gross National Product, 1958-62.

Table 37 presents an index of GNP in the period of the Second Five Year Plan if and only if the following conditions are met: (a) industrial targets as set forth in the Second Five Year Plan are substantially fulfilled and (b) agricultural production of basic food crops, livestock, and nonindustrial crops achieved a rate of increase that is only about half those set forth in the Second Five Year Plan, while cotton and industrial crops substantially fulfill the goals set in the Second Five Year Plan.

The question of the feasibility of this projection depends on two interrelated factors. The first is the adequacy of the projected investment expenditures given in Table 38 to give the increases in production embodied in the projected industrial targets for 1962. The second is the possibility of raising investment in relation to

total output to the level set forth in Table 38* without affecting incentives for peasants and workers and without undue strain on the economy. The data pertaining to these factors are given in Table 42.**

The unrealistic rate of increase in agricultural production set forth in the Second Five Year Plan obscures the actual economic policies which would need to be followed to carry out the level of investment embodied in the projection in Table 38. In the first place, Table 34*** gives estimated rural retail sales planned for 1962 compared with expected cash income based on a more realistic projection of agricultural production as given in Table 35.*** These figures indicate a gap of 5 billion to 6 billion yuan. Of the projected total farm cash income of about 25 billion yuan in 1962, more than 10 billion yuan would be for fertilizer, tools, and other production leaving 14 billion to 15 billion yuan for cash purchases of consumer goods. Imputed home consumption would be about 17.5 billion yuan, yielding a total farm consumption of about 32 billion yuan. This is less than 20 percent higher than in 1955, or an average annual rate of increase in 1955 constant prices of about 2.5 percent and an average per capita increase of less than 1 percent annually. In view of the rapid socialization of the farm population and the increased efforts for water conservancy and other uses of farm labor it is most unlikely that such a small rate of increase in per capita consumption is feasible. On the other hand, incentives for increased production in the nonagricultural sectors call for some such rise in real income as that projected for urban workers. Therefore, it is possible if not probable that the Communist leaders will not enforce the austerity embodied in doubling investment in the Second Five Year Plan period over the planned level for the First Five Year Plan. If prices were adjusted so that budget revenue were affected by the full amount of the probable shortfall in farm cash income, 1962 budget revenue would be lowered by nearly 10 percent and since other budget expenditures are projected at levels likely to prove the minimum feasible, the ruduction would be almost entirely at the expense of budget expenditures for economic construction. This amount would be a reduction of about 15 percent in these expenditures in 1962. Since investment in light industry and agriculture could not be reduced without affecting the consumption level and the incentives implied in these levels of production, most of this reduction would fall in investment in heavy industry. The investment expenditures for 1958-62 are therefore reduced

* P. 127, above.
** P. 138, below
*** P. 121, above.

by 15 percent to secure the estimate of trends in GNP that is actually expected for the Second Five Year Plan Period.

4. Trends in Sector Composition of Gross National Product.

Table 39* gives the estimates of income originating by major sector in 1955 prices for the period under consideration. Figure 3** shows percentage contributions by major sectors for 1952, 1957, and 1962. Agricultural production excluding consumer services will probably contribute less than a third of GNP in 1962 compared with more than half in 1950. Industry will contribute about one-quarter of total GNP in 1962 compared with a little over 10 percent in 1950. The projected level of industry of about 25 percent of GNP in 1962 is only a little less than industry's contribution to Japan's GNP which has remained at about one-third of total output. These projections are in 1955 Chinese prices, which still favor industrial products relative to agricultural commodities, and current price estimates would show industry somewhat lower in its contribution to GNP. Therefore, the period from 1958 to 1962 will show considerable progress toward industrialization.

The sector indexes in Table 37 are based on detailed estimates of gross value of production by particular industry, from which estimated costs of production in 1952 are subtracted to secure an estimate of income originating in each industry sector. In the case of agriculture, industry, and transportation these estimates of value added by sector have been used to weight physical production data in order to derive the indexes given. In the case of trade, gross revenue originating in trade in agricultural products has been moved by an index of farm procurement, and trade in heavy and light industry products, by the production indexes. Therefore these indexes are based on value added weights derived by subtracting from the estimated producer's value of output the costs of raw materials and fuel, thus securing the proper contribution of individual commodities and industries to the economy. Communist statistics and all targets for increases in the value of industrial production are based on gross value, and specifically include in the valuation raw material and fuel costs, indirect taxes, and other producer taxes. This means, for example, that in the Chinese Communist statistics for trends in industrial production the value of raw cotton is included in the value

* Table 39 follows on p. 131.
** Following p. 130.

50X1

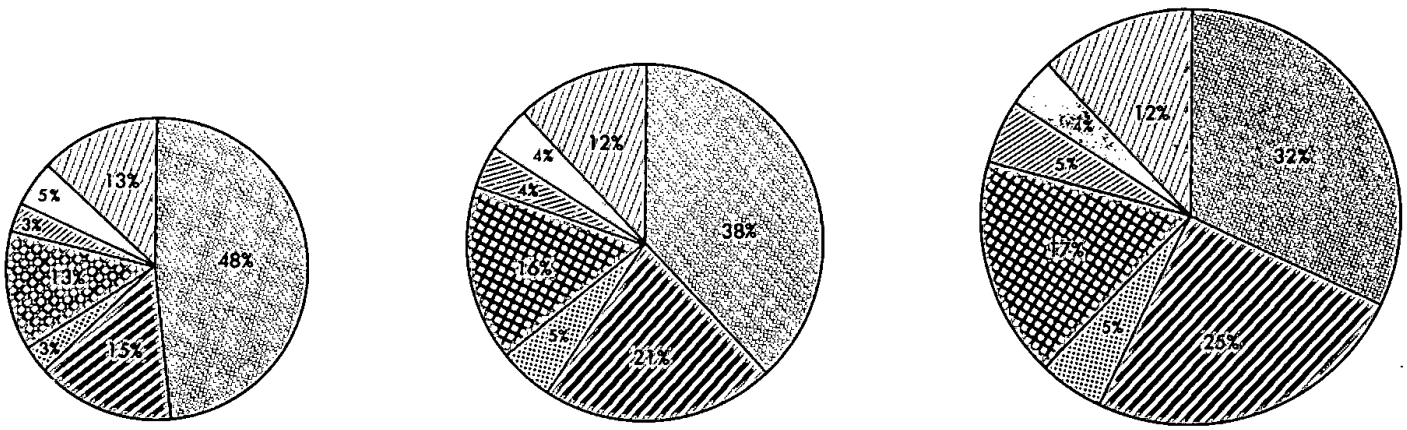
Figure 3

COMMUNIST CHINA

GROSS NATIONAL PRODUCT, BY SECTOR OF ORIGIN

1952, 1957, and 1962

(1955 Constant factor prices)



1952
67.5 billions of yuan

1957
97.1 billions of yuan

1962
135.7 billions of yuan

- Agriculture, Forestry, and Fisheries
- Industry
- Modern Transportation and Communications
- Trade, Native Transportation, and Other Business Services
- State Construction
- Government (including Health and Education)
- Miscellaneous Consumer Services and House Rent

50X1

25784 5-57

Table 39

Communist China: Income, by Sector of Origin a/
1950-62

Billion Yuan at 1955 Prices

Sector	1950	1951	1952 b/	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Agriculture	28.3	29.8	32.41	32.2	32.0	34.8	35.8	36.9	37.9	39.2	40.5	41.5	43.4
Industry	5.4	7.5	10.18	12.7	15.3	16.1	18.9	20.9	23.0	26.1	29.9	33.6	38.2
Modern transportation and communications	1.4	1.7	2.03	2.6	3.2	3.5	3.9	4.5	5.1	5.6	6.2	6.9	7.6
Trade, native transportation, and miscellaneous business services	5.7	7.3	9.08	10.9	12.4	12.8	14.3	15.4	16.7	18.3	20.0	21.5	23.4
Construction	0.8	1.4	1.66	2.3	2.7	2.6	3.6	3.7	4.3	5.0	5.8	6.7	7.8
Government	2.8	3.1	3.46	3.6	3.8	4.0	4.2	4.4	4.6	4.9	5.3	5.5	5.7
Consumer services and house rent													
Agricultural	3.6	3.7	4.00	4.0	3.9	4.2	4.2	4.4	4.6	4.7	4.8	5.0	5.2
Nonagricultural	3.0	3.4	4.66	5.5	5.9	6.1	6.6	6.9	7.5	8.2	9.0	9.8	10.8
Total GNP at factor cost	51.0	57.9	67.48	73.8	79.2	84.1	91.5	97.0	103.7	112.0	121.5	130.5	142.1
Estimated value of indirect taxes	2.2	3.0	3.92	4.8	5.3	5.3	6.4	6.9	7.5	8.3	8.9	9.8	10.7
GNP at 1955 market prices	53.2	60.9	71.40	78.6	84.5	89.4	97.9	104.0	111.2	120.3	130.4	140.3	152.8

a. Estimated for 1950-57; proposed for 1958-62.
b. 1952 figures are carried to two places for use with indexes.

of cotton yarn produced and the value of cotton yarn is in turn included in the value of cotton cloth produced. In some cases, for example, cotton ginning, rice polishing, and oil extraction, where processing costs are very small in relation to the market value of the finished product, the gross value greatly overstates the importance of the processing that has taken place. Also, cigarettes, wine, and salt with high commodity tax rates have high figures for gross value in relation to value added in production.

The definition of gross value in Communist statistics makes a distinction between creating a new "use value" in processing and "restoring" or "improving" the use value of a commodity. Therefore the gross value figures for dyed or printed cloth do not include the value of cotton cloth but printing and dyeing are added at cost since they do not "change" the "use value" of cotton cloth. Similarly the gross value of repair work is added at cost. An example given is that of an electric motor which, when combined with equipment to make it power-driven, secures a new "use value" and the gross value will include the price of both motor and equipment. The gross value of repair or improvement in an electric motor itself is limited to the charges for the work done.

The pyramiding implicit in this use of gross value in Communist figures of industrial production is avoided in the indexes used for this estimate. On the other hand, it is important to evaluate and compare the estimates being used in this paper and the official figures for annual production and 1957 and 1962 targets found in Communist planning speeches. An important effect of the use of gross value figures in Communist statistics is to overstate the importance of industrial output in relation to agricultural output. In 1954, for example, the contribution to national income of agriculture is given as 75 percent of gross value and the contribution of industry as 50 percent of gross value. In 1954 official figures give agriculture as 50 percent of the total value of industrial and agricultural production in 1954, but these percentages for production costs give 60 percent of total income originating for agriculture. Even then almost all commodity taxes, which are for the most part on industries processing agricultural products, remain to overstate industry's contribution to the economy.

The second important effect of the figures on gross value of production is to overstate the share of industrial output for light

industry with its heavy load of indirect taxes and lower percentages of gross value for income originating, and to understate heavy industry's share. In the situation in China where heavy industry is increasing more rapidly than light industry, this means that official statistics for increases in total industrial production understate the industrial increases that have actually taken place. By and large the value added index and the gross value index for light industry or for heavy industry taken separately are not greatly different (see Tables 40* and 42**). The value added index for industry as a whole excluding individual handicraft, however, is 215 (1952 = 100) in 1957 and 409 in 1962. The same physical production estimates used for the value added index but applied against gross value weights gives a gross value index of 182 for 1957 and 361 for 1962.

Table 40 makes a comparison of the gross value index on which trends have been estimated with Communist absolute figures for gross value of production. The use of physical production data for the indexes does not incorporate improvements in the product mix of an industry that would raise its gross value even in constant prices. On the other hand, regional variations in September 1952 prices -- the prices used for Communist figures -- probably are higher for small plants outside the main industrial concentrations and may be reflected in the increases presented. Furthermore, 1952 prices of more complex products are probably high in relation to costs of production in volume. By and large, physical production data against gross value weights would somewhat understate trends in gross value in constant prices as Chinese industry grows and increases take place in the range of products produced. This factor does not account for all of the greater increases in the Communist gross value indexes compared with this estimate. The main difference lies in the trend from 1952 to 1954 where light industry is shown in Communist figures to rise much more rapidly than physical production figures justify. The difference seems to be mainly due to inclusion of light industry production, probably for the most part food-processing industries, in 1953 and 1954 figures as the result of the forced purchase of basic food crops -- production which was not included in 1952. The impact on the estimated trends in value added is much less than appears from the gross value indexes since value added is small for food processing in relation to other light industry production.

* Table 40 follows on p. 134.
** P. 138, below.

Table 40

Communist China: Index of Gross Value of Production
1950-57 and 1962

1952=100

	1950	1951	1952	1953	1954	1955	1956	1957	1962	1962 Increase over 1957 (Percent)	Average Annual Rate 1954-62 (Percent)
Industrial production (excluding individual handicraft)											
Chinese Communist data		78	100	132	154	166	198	235 a/	421 a/	79	13.4
CIA estimate	54	75	100	124	145	152	182	201	361	80	12.1
Heavy industry											
Chinese Communist data			100	137	164	192	236	276	610	121	17.8
CIA estimate	49	73	100	137	166	187	226	252	516	105	15.4
Light industry											
Chinese Communist data			100	128	147	148	174	207	296	43	9.2
CIA estimate	57	77	100	116	131	129	153	167	259	55	8.9
Agricultural production											
Chinese Communist data			100	103	107	115	125 (Plan)	130 (Plan)	166	28	5.6
CIA estimate	87	91	100	100	99	110	111	116	139	20	4.3

a. Based on individual handicraft meeting its original target and similar increase occurring during the Second Five Year Plan.

The figures for the gross value of agricultural production reflect the extent to which some of the figures for agricultural production have been discounted and the unlikelihood that 1962 goals can be achieved. In any case Communist estimates of the value of agricultural production, particularly for production other than basic food crops and important industrial crops, are not nearly as reliable as their statistics on industrial production, because of the vast extent of the farm population, the difficulties of estimating production of innumerable small households, and political pressures to hide the true situation from the peasants. Inclusion of production in later years that were not included in figures for previous years is inevitable. In this connection Communist 1952 statistics for agriculture have not been revised in spite of greater coverage and greater control over the countryside achieved since 1954.

5. Trends in Distribution of Gross National Product, by End Use.

Estimates of Communist China's GNP by end use have been made in current prices for 1950-55, based on retail sales figures adjusted to secure total final sales of goods to consumers, on estimates of the imputed value of farm home consumption derived from procurement figures for the basic food crops and cotton, and on scattered information on other agricultural crops. Budget data furnish relatively reliable figures on government purchases and state investment. Estimates of short-term loans levels for industry and trade and estimated private farm investment, based on typical rural per capita budgets, are used to estimate other gross investment expenditures. Finally, consumer services and house rent other than budget expenditures for education and other services are estimated on the basis of probable relationship to purchases of consumer goods. Net foreign investment is estimated on the basis of the import surplus from foreign trade figures. These estimates of current expenditures are then deflated by price indexes to secure an estimate of GNP by end use in constant prices.

Retail sales figures planned for 1956, 1957, and 1962 give projected levels for sales of consumer goods. The 1956 plan budget and other information on budget expenditures planned for the rest of the First Five Year Plan and for the Second Five Year Plan are available. The recent Party Congress was concerned with the proper proportion of budget expenditures to total national income and with the level of military and other government expenditures in the budget, as well as with the planned level of state investment for construction and installation of equipment as a proportion of total budget expenditures. These discussions permit a relatively meaningful projection of budget

expenditures over the period of the Second Five Year Plan. These projections for retail sales and budget expenditures have been checked against trends in available consumer goods and available investment goods based on the production targets given. The industrial production targets for the Second Five Year Plan and the trends in retail sales and budget expenditures are in balance with each other. Table 38 shows the trends in GNP, by end use in 1952 prices, to be expected for the period from 1956 to 1962 if the Second Five-Year Plan is carried out as proposed at the Eighth Party Congress except for a more realistic estimate of increases in agriculture.

The pattern for expenditures for the period concerned shows a slow rise in the value of government purchases of goods and services, but a decline in the percentage of total expenditures that are devoted to government purchases. Net foreign investment in China by the USSR has been significant in the period from 1951 through 1955, but is expected to cease and Communist China is expected to begin repayments on Soviet loans during the period of the Second Five Year Plan. Consumption expenditures would steadily decline as a percentage of total output, although the expected level in 1962 of about 68 percent of total GNP shows the intentions of Communist planners to raise the level of consumer goods production to avoid popular discontent.

The Second Five Year Plan as announced calls for a steady rise in investment, most of which is budgeted state investment, as shown in Tables 38 and 41.* In the 12-year period, gross investment expenditures would rise to nearly one-quarter of total output. In 1957, at the end of the First Five Year Plan, about 30 percent of the total increase in output over 1952 would be devoted to investment, and by 1962 nearly one-third of the increase in output over 1957 would go for the investment program. The planned level of investment is believed adequate for the production increases scheduled. The ratio of state investment planned for 1958-62 to increases in output based on production trends are the ratios given in Table 42.** Twenty-five percent of Five Year Plan investment expenditures in the last year of each Plan is taken to be effective for the full year's production to allow for incompleted projects and projects finished during the final year. The volume completion figures are used rather than total expenditures for capital construction. Available data are far from conclusive, but some

* Table 41 follows on p. 137.
** Table 42 follows on p. 138.

Table 41

Communist China: Percentage Distribution of Gross National Product in 1955 Prices, by End Use a/
1950-62

Percent

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Consumption	79.7	74.8	75.2	72.8	70.0	70.6	69.5	70.5	71.0	71.3	69.8	69.1	68.4
Government purchases	13.0	15.2	11.7	12.3	11.4	11.4	10.4	10.3	10.2	10.2	10.0	9.6	9.2
Net foreign investment	-0.2	-1.1	-0.8	-1.8	-1.2	-1.3	-0.1	0.0	0.1	0.2	0.2	0.2	0.2
Domestic investment	7.5	11.1	13.9	16.7	19.8	19.3	20.2	19.2	18.8	18.3	20.0	21.1	22.2
Total GNP at 1955 market prices	100	100	100	100	100	100	100	100	100	100	100	100	100

a. Based on a 15-percent reduction in investment proposed in the Second Five Year Plan.

Table 42

Communist China: Relation of State Investment to Increases in Industrial Production 1957 and 1962

Billion Yuan

	1957			1962		
	Investment During First Five Year Plan	Increase in Production Over 1952 (1952 Prices)	Ratio	Investment During Second Five Year Plan	Increase in Production over 1957 (1952 Prices)	Ratio
Industry	19.6	9.6	2.0 : 1	51.0	16.5	3.1 : 1
Heavy industry	17.6	7.4	2.4 : 1	45.9	13.5	3.4 : 1
Light industry	2.0	2.2	0.9 : 1	5.1	3.0	1.7 : 1

construction cost data are available for certain industries. A comparison of these cost figures with the probable value added (in 1952 prices) for full production for these projects gives the following ratios: an integrated steel mill, 1.8 to 1; coal industry, 2.2 to 1; a thermal electric power plant, 3.9 to 1; cotton textile mill, 2.2 to 1. Industrial increases from 1952 to 1954 are known to be largely due to greater utilization of capacity, particularly in light industry, and this explains the lower ratios for the First Five Year Plan. In the Second Five Year Plan, some of the increases in light industry production seem to be predicated on greater utilization of existing capacity. The level of heavy industry investment shows that almost all the projected increases for 1962 are based on investment expenditures to be undertaken during the Second Five Year Plan. In general, the figures indicate that the level of investment planned is adequate for the increases in production targeted.

V. Foreign Trade and Aid Programs.

A. Direction and Composition.

The foreign trade of Communist China has been increasing rapidly since 1950, and the value of total trade in recent years has surpassed the highest prewar level. By 1955 the value of foreign trade had reached about $4,485 million,* an increase of 30 percent over the 1954 level. The physical volume of China's foreign trade in 1955 is estimated to have been about 13 million tons, an increase of about 25 percent over 1954. 136/ Total foreign trade and its direction from 1950 through 1955 are shown in Figure 4.**

The primary flow of trade is between Communist China and the Soviet Bloc. Whereas total trade has increased about 2-1/2 times during the past 6 years, trade with the Soviet Bloc has increased by 7 times. Redirection of trade to the Bloc appears to be a planned effort by Communist China, in conformity with Mao's "lean to one side" policy, rather than a reaction to Free World trade controls.

Ordinary trade with the Bloc under barter agreements is nearly in balance, 137/ but in trade with the USSR, including long-term credit and aid agreements and military receipts under loan or grant, 138/ Communist China in 1955 had an export deficit of more than $600 million. In trade with the Free World in 1955, Communist China had an export surplus of about $35 million. The balance of trade in 1955 is shown in Table 43.***

By 1955 the Chinese Communists had increased exports to nearly four times the 1950 level, largely by expanding exports of traditional agricultural and mineral products, which make up over 75 percent of

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* In the absence of US - Communist China trade and currency remittances carried on directly in yuan and US dollars, there is no genuine rate of foreign exchange between the two currencies for trade purposes. The rate of exchange used as the basis to convert the yuan value of Communist China's foreign trade into US dollars is the average between the buying and selling rates for sterling remittances in Canton. The sterling rate is consistent with the remittance rate for other Free World currencies in Canton. Use of this sterling cross-rate permits conversion of yuan into dollars through a currency which actually is exchanged directly into Chinese yuan.

** Following p. 142.

*** Table 43 follows on p. 142.

Table 43

Communist China: Estimated Balances of Imports and Exports a/ 1955

Million $US

	Imports	Exports	Total Trade
USSR	1,560 b/	920	2,480
European Satellites	450	450	900
Asian Satellites	55	175 c/	230
Total Sino-Soviet Bloc	2,065	1,545	3,610
Free World	420	455	875
Grand total	2,485	2,000	4,485

a. 139/
b. Includes acquisition of military and other equipment on loan.
c. Includes aid deliveries.

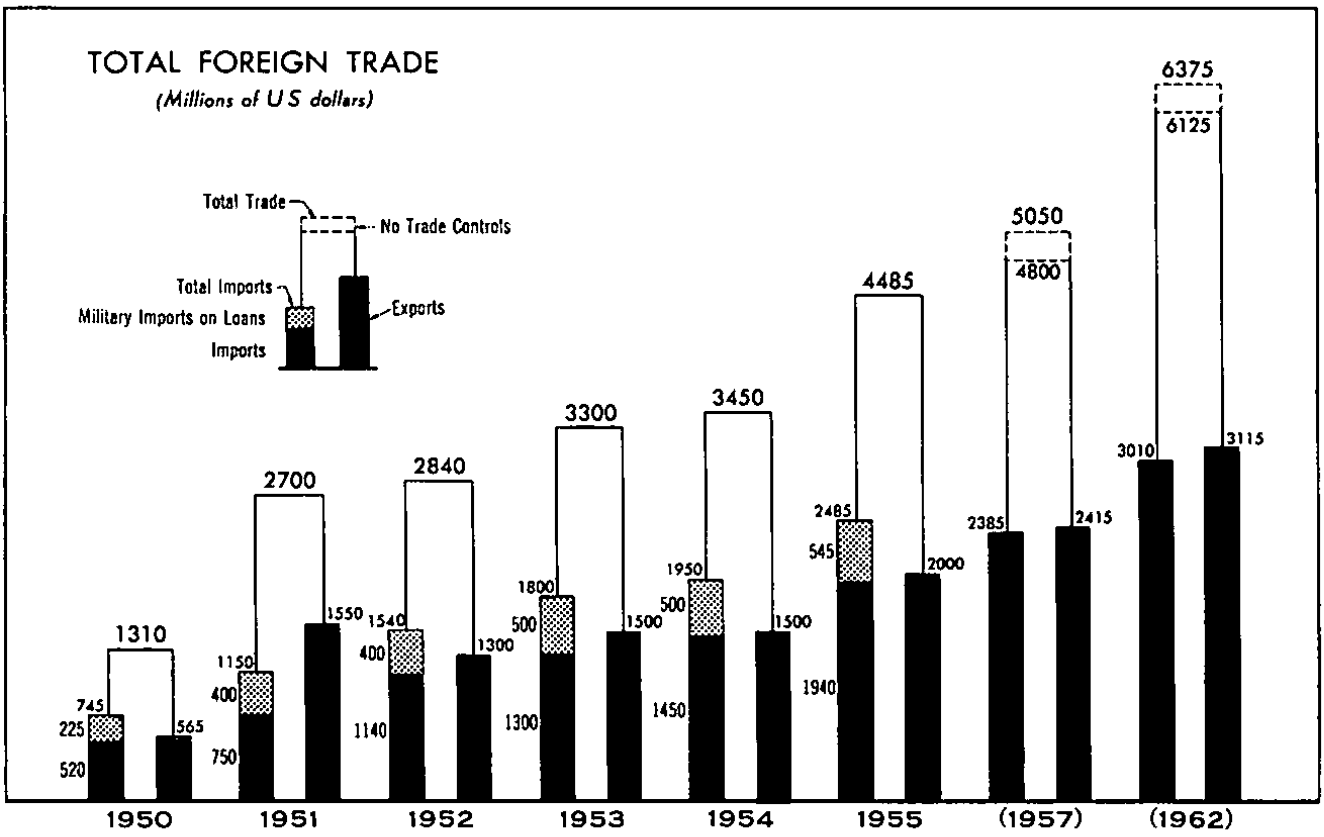
total exports. Although there has been a great deal of propaganda about increases in export of light industrial manufactures -- such as sewing machines, bicycles, fountain pens, textile machinery, and handicrafts -- export of such products in 1955 amounted to less than 4 percent of total exports. 140/ The general composition of Chinese Communist exports for 1950, 1953, and 1955 is shown in Table 44.*

Sustaining a large export program is necessary because of the need to import equipment for Communist China's industrialization plans. As shown in Table 45,** the single largest category of imports consists of machinery and equipment required for specific industrial projects. During the Chinese Communist First Five Year Plan, about 15 percent of total investment in basic construction is allocated to importing equipment. 141/ Almost all of this is being purchased within the Bloc, with

* Table 44 follows on p. 143.
** Table 45 follows on p. 143.

Figure 4 50X1

COMMUNIST CHINA
FOREIGN TRADE
1950-55, 1957, and 1962



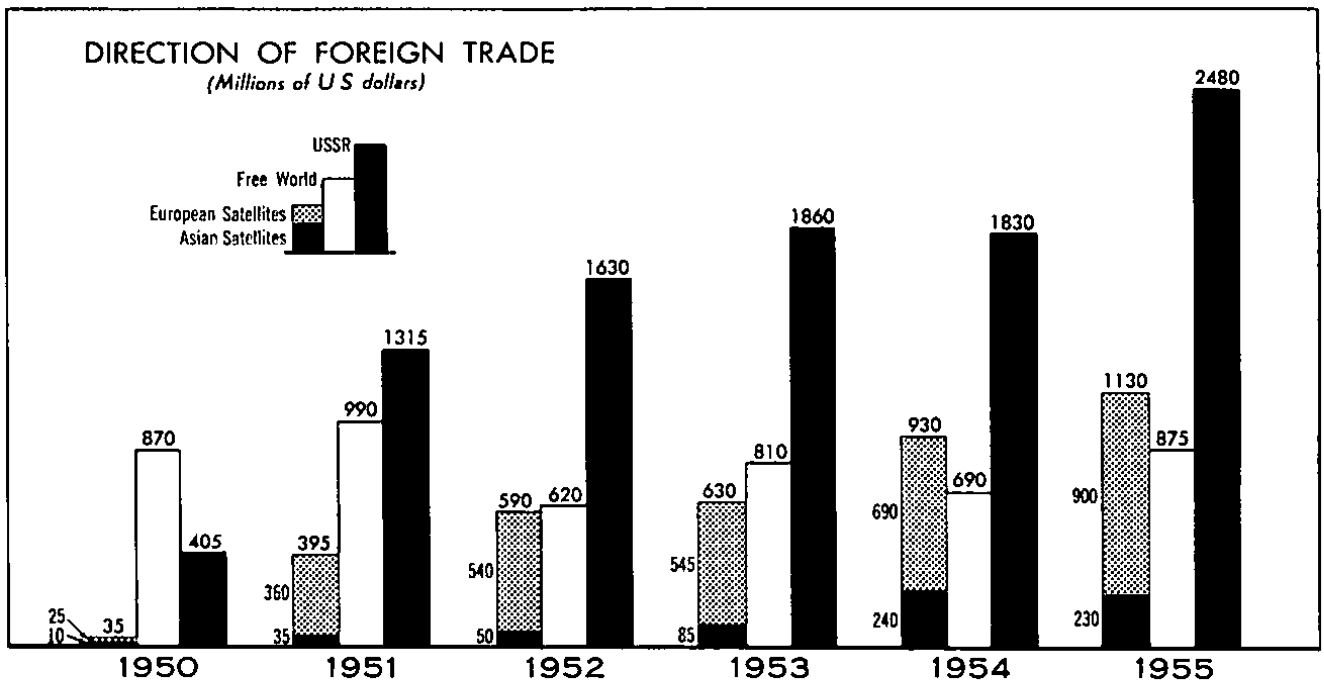


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Table 44

Communist China: Composition of Exports a/
1950, 1953, and 1955

Million $US

	1950	1953	1955 b/
Cereals, oils, seeds	210	600	650
Textile fibers, products	80	150	200
Animal products	130	300	400
Miscellaneous vegetable products	65	250	350
Coal, metals, minerals	30	100	150
Other commercial	50	100	250
Total	565	1,500	2,000

a. 142/
b. Includes export of aid materials to North Korea and North Vietnam.

Table 45

Communist China: Average Annual Imports a/
1953-55

Million $US

Equipment for basic industrial construction projects	525
Military equipment on current trade account	150
Essential raw materials and supplies	400
Vehicles, metals, and agricultural and other machinery	200
Consumer goods and miscellaneous	225
Total imports on current trade account	1,500
Military imports on loan from USSR	500
Total average annual import	2,000

a. 143/

the USSR supplying on the average an estimated $250 million to $300 million annually in industrial equipment, and the European Satellites about $250 million annually. The Chinese Communists are equally dependent upon imported metals, vehicles, agricultural machinery, and essential raw materials. In 1956, when Chinese Communist steel production was officially scheduled to be 4.5 million tons, it was also planned to import 750,000 tons of steel in order to meet expanding industrial requirements. 144/ Agricultural machinery, particularly tractors, is being imported in large volume from the USSR and European Satellites, and at the same time the Chinese Communists have made offers to purchase tractors in quantity from the Free World. The Chinese Communists will also continue to be dependent upon imports to meet rubber, petroleum, and certain chemical requirements.

Soviet and European Satellite assistance to Chinese Communist industrialization, in the form of commitments to supply equipment, technical data, and planning on specific projects, apparently is being paid for through normal exports. There is no evidence that the USSR or the European Satellites have extended aid of Communist China in the form of outright gifts of nonmilitary equipment, except for such small items as equipment for the first state farm. As long as Communist China exhibits the ability to pay for imports, it is improbable that grants-in-aid for economic development will be preferred by Bloc nations. The USSR has extended two modest loans for Chinese industrialization -- one made under the Sino-Soviet Aid Agreement of 14 February 1950 in the amount of $300 million, 145/ and a second loan announced on 11 October 1954 in the amount of $130 million. 146/ These loans are being repaid mainly with Chinese exports of agricultural and raw material products.

On the other hand, Communist China has mounted an aid program to North Korea and North Vietnam with an announced value of about $650 million extending over a 6-year period to supply these countries with basic industrial products and equipment, as well as with food and other materials. The amount of Chinese Communist aid amounts to less than 1 percent of GNP, but it has had an impact on the Chinese foreign exchange position. In 1954, deliveries to North Korea alone are estimated to have been made at a sacrifice of at least $50 million in exportable commodities. Had these commodities been employed in foreign exchange, they would have paid for nearly 10 percent of total Chinese capital goods imports for 1954. 147/

Recent events in Hungary and Poland should have a serious adverse effect on China's trade pattern with the European Satellites and on certain parts of China's industrial development program. China is estimated to have had a trade turnover with Hungary and Poland in 1955 of about $250 million to $300 million, with trade probably balanced. Imports from Hungary will likely be completely curtailed for the next several years. On the whole, however, Hungarian contributions to the Chinese Communist industrialization effort have been relatively small. Transportation equipment, especially busses and trucks, have been the single most significant item furnished by Hungary. Two coastal freighters were delivered in China this year, and a number more were on order. Three ore-dressing plants were scheduled for completion and delivery in March 1956, and Hungary was also reported manufacturing power plants, telecommunications installations, and some other industrial installations, including an aluminum-processing plant.

Poland, on the other hand, was to contribute a relatively large share of Bloc equipment, and in addition it furnishes the bulk of the Bloc flag shipping service between Europe and China. Most of the coastal freighters which China was purchasing in Europe were ordered from Poland. Several entire plant installations are being supplied to China by Poland. The largest is a sugar combine consisting of a refinery, alcohol plant, yeast plant, dry ice plant, and all necessary power and transportation facilities. In addition, Poland is currently designing and manufacturing a glider combine which is to be one of the largest in the world and is constructing plants for bridge fabrication, synthetic fertilizer, cellulose, cylinder boring, and for other purposes. The extent to which delivery of this equipment will be delayed or curtailed cannot be determined at this time.

Chinese exports to Hungary and Poland have consisted primarily of industrial agricultural crops, foodstuffs, and iron ore. On account of the disruptions in shipping service there will probably be some delays in scheduling future shipments. There is no indication, however, that exports to these countries will be curtailed. In early November, China extended material and financial aid amounting to about $7.5 million to Hungary.

Closure of the Suez Canal has had a substantial impact on Chinese Communist oceanborne commerce. Delivery through the canal of Western European and Satellite cargoes supporting Chinese industrial construction and agricultural development was curtailed and seaborne deliveries of petroleum products from the Black Sea to the Communist Far East were also reduced.

In the last few years about 60 percent of Communist China's total import trade passed through Suez. In order for shipments to arrive at the appropriate time, they will have to be diverted to more costly overland delivery via the Trans-Siberian Railroad. Rail facilities would not suffer appreciably from the additional tonnage of China-bound industrial products. The impact of an increased movement of petroleum could present difficulties, however, as the Soviet tank car park has not kept pace with rapidly increasing petroleum production. Less urgent deliveries will probably be met by using the Capetown route.

The bulk of the cargo passing through Suez has consisted of fertilizers. Overland shipment of the bulky fertilizers is impractical, and the number of vessels being offered for Far East runs is currently very limited. Deliveries of this type of commodity will thus likely be curtailed, and a shortage of chemical fertilizers for the agricultural improvement program during 1957 could result. Communist China has depended on Europe for over two-thirds of its fertilizer requirements.

Only about 35 percent of Communist China's total exports would pass through Suez. The lack of vessels to carry these goods, primarily agricultural products, could cause a storage problem in China, but their timely arrival in Europe is not essential. Industrial raw materials exported to the USSR and the European Satellites are for the most part transported overland. Waterborne iron ore shipments to Poland and Czechoslovakia could be curtailed as these countries can purchase ore easily from the Scandinavian countries.

B. Trade with the Free World and Economic Activities in Underdeveloped Areas.

The total value of trade with the Free World changed only slightly during the period 1950-55, but the proportion of trade with the Free World declined from over two-thirds of total Chinese Communist trade in 1950 to less than one-fifth in 1955 (see Figure 4*). In recent years the Chinese have run a net export surplus in trade with the Free World which approximates the estimated value of unrecorded imports from the Free World. Nearly half of China's non-Bloc trade is with other Asian countries -- primarily Japan and Hong Kong -- and with the Near East. Trade with these areas increased 30 percent in 1955 over 1954.

* Following p. 142, above.

The shift in China's trade from the West to the Bloc has greatly restricted trade with Japan, and the further shift in import demand from consumer goods to capital goods has almost completely destroyed the market for one of Japan's major exports, textiles. Except for cement and strategic goods (demand for which is apparently motivated by political rather than economic objectives), China has shown little interest in Japanese products, and does not appear to be seriously attempting to increase trade with Japan.

The commodity composition of Chinese imports from the Free World has varied sharply each year, probably in response to specific requirements. In 1955, over one-third of import tonnage from the West was made up of fertilizers; other principal items were iron and steel products and machinery, rubber, cotton, and other chemicals. Western Europe furnished about 53 percent of Communist China's Free World imports, with Japan supplying about 13 percent, and Hong Kong 11 percent.

In 1955, Japan took over 40 percent by volume of Communist China's exports to the Free World, receiving salt, soybeans, rice, nonferrous metals and ores, and other products. Over 30 percent of these exports went to Hong Kong, but about one-third of this was probably reexported. Western Europe received about 14 percent of the exports, including soybeans, peanuts, and other oil seeds; industrial oils; foodstuffs; other agricultural products; nonferrous ores; and textiles.

Communist China's economic activities in the underdeveloped countries of the Free World have consisted primarily of efforts to promote and expand trade relations with these countries. Increased trade ties and a concomitant increase in the exchange of cultural and economic delegations have provided opportunities to negotiate for the establishment of permanent trade missions -- and intermediary step used by Communist China to gain diplomatic recognition.

In December 1956, Communist China had trade agreements with Egypt, Lebanon, Syria, Burma, Ceylon, India, Indonesia, and Cambodia -- only one of which (Ceylon) was in effect before 1954. The Sudan and Communist China have expressed a mutual willingness to engage in trade and negotiations for the conclusion of a trade agreement with Pakistan. In 1955 trade was also carried on with the Gold Coast, French Morocco, Nigeria, and Malaya.

Negotiations for the establishment of permanent Chinese Communist trade missions have often taken place concurrently with the negotiations of trade agreements. Communist China has established permanent missions in Egypt, Lebanon, and Syria. Egypt and Syria officially recognized the government of Communist China after the latter's trade missions had been sent. An exchange of "mixed commissions" provided for in the Sino-Cambodian aid agreement will permit Communist China to have de facto representation in Cambodia.

As would be expected, imports from the underdeveloped areas have consisted primarily of industrial raw materials, such as rubber, cotton, jute, and oils, as well as foodstuffs. In order to promote trade ties with underdeveloped countries, Communist China has often offered to pay premiun prices for the raw material exports of these countries. In late 1952, Ceylon, faced with markedly declining rubber prices on the world market, accepted Communist China's offer of premium prices for Ceylonese rubber in spite of the UN embargo and the loss of US aid.

In several instances Communist China has selected items of trade which have had a political impact in view of either their current surplus or scarcity. Under the first Sino-Burmese trade agreement, Communist China accepted 150,000 tons of surplus Burmese rice in payment for Chinese textile machinery and equipment for the expansion of the Burmese textile industry. In the Sino-Indian trade negotiations, it was difficult for India to turn down the Chinese offer of 50,000 tons of steel in view of the critical need for steel in implementing the Indian Second Five Year Plan.

The traditional agricultural character of Chinese exports to the underdeveloped areas has changed, and presently exports consist primarily of textiles, light industrial manufactures, steel products, and local products. The quality and variety of items offered for export reflect the growth of the Chinese economy. The inexpensive Chinese textiles have found a ready market throughout the underdeveloped areas, and light manufactures, such as electric fans, fountain pens, flashlight batteries, sewing machines, and bicycles, sold at low prices, are also in demand. Communist China has been careful not to overextend itself as to the quantity or variety of exports, and the items offered have generally not been in critical supply in China. The expansion of trade in these areas is closely related to the regime's political objectives of building goodwill and selling the "new China."

A new approach in the Chinese Communist bid for influence in Southeast Asia is seen in the Sino-Cambodian aid agreement concluded in June 1956. This agreement provides for a grant-in-aid of about $22.4 million during 1956 and 1957 in the form of technical equipment, construction materials, and merchandise. Both countries have stressed the unconditional nature rather than the amount of the aid. A careful selection by the Chinese Communists of projects to aid Cambodia in the fields of irrigation, light industry, transport and communications, education, and electric power maximizes the Chinese Communists' opportunities for developing contacts and for firmly establishing economic, social, and political relations with Cambodia and its people.

The second grant of economic assistance to a non-Communist country was given in October 1956 when Communist China and Nepal signed an agreement under which the former is to grant Nepal approximately $12.6 million over a 3-year period without compensation. The aid is to be provided partly in the form of technical assistance and machinery and partly in Indian rupees, and according to the Nepalese Prime Minister, the agreement contains no conditions on the use of the aid, no political strings, and specifies that no Chinese technical personnel will be sent to Nepal.

Communist China will undoubtedly continue to seek to improve and strengthen its economic relations with the Afro-Asian underdeveloped countries through measures adapted to current conditions in the individual nations and geared to China's own industrial growth and its plans for achieving the position of dominant military and economic power in Asia.

C. Future Trends.

Although the rate of growth will decline, Communist China's foreign trade should continue to grow from 1957 to 1962. Some of the elements which have permitted a rapid growth of trade since 1950 are likely to be diminished or eclipsed in the future. As import requirements continue to increase, however, and exports are pushed concurrently, there will be a resulting absolute growth of trade, but at a declining rate. The long-term effect of the Hungarian and Polish situations as well as of the disruptions caused by Suez has not been fully estimated and is not considered in projected foreign trade.

The Chinese foreign trade goal for the First Five Year Plan is not clearly defined but probably calls for a level of trade of about $4,725 million in 1957. It appears likely that this goal will be attained, but not greatly exceeded, with foreign trade probably reaching about $4,800 million in 1957.

Growth of trade after 1957 will depend primarily upon export capabilities and will involve a minimum of imports on credit. During 1950-55, exports increased annually on the average of about $285 million and in order to reach the estimated level for total trade of $4,800 million in 1957 exports must increase about $200 million annually for the next 2 years. Between 1957 and 1962, it is estimated that the Chinese Communists will be able to increase exports about $150 million annually at the expense of domestic distribution of food and consumer goods. The extent to which the Chinese will exploit this capability is dependent upon a number of complex, interacting variables, such as import needs, foreign market position, political gains to be derived from expanded foreign trade, and the limits placed by the state on domestic consumption.

A part of the gain achieved in future export earnings will probably be diverted to repay long-term Soviet loans (industrial, military, and joint-stock company repayments), requiring from $50 million in 1958 to $100 million annually in 1960. It is estimated that perhaps $25 million of the postulated annual growth in exports may be diverted to these payments. Therefore, assuming a balanced trade during the period, Chinese Communist foreign trade probably will increase about $275 million annually, made up of $150 million in increased exports and $125 million in imports, with the exports surplus used to reduce the long-term debt to the USSR. By 1962, total trade should reach $6,125 million; and in absence of trade controls could reach about $6,375 million.

The composition of Chinese Communist foreign trade through 1962 is not likely to change significantly. The major exports will continue to be agricultural and raw material products, although attempts are being made to diversify exports, primarily through promoting Chinese agricultural specialties, handicrafts, and light industrial products. Imports will continue to consist of industrial equipment and essential raw materials, although future imports may reflect greater utilization of advanced types of machinery, metals, and chemicals. There is little chance that consumer goods will occupy more than 10 percent of total imports for many years to come.

In the event that trade controls against China are partially or completely removed, the Chinese Communist position in world trade would be more favorable than it is at present, and it can be expected that the Chinese Communists would divert some of their trade from the Bloc to the Free World. The extent to which this might occur will depend upon a number of political and ideological as well as several economic factors. Requirements of replacement parts for Soviet machinery and equipment and the Chinese Communist reliance, in their long-range planning, on the USSR as a dependable source of supply of equipment at stable prices are factors that will tend to depress the amount of possible increase in trade with the Free World. On the other hand, Chinese Communist desire to take advantage of greater price and quality variations available in unrestricted world markets, to conserve total Bloc resources of capital equipment, and to exploit the political aspects of trade, will tend to increase the volume of Free World trade. It is estimated that the Chinese will by 1958 divert some of their trade from the Bloc and, in the absence of controls, may conduct up to 30 to 40 percent of total trade with the Free World. The character of this increased trade would probably be influenced more by Chinese Communist than by Free World desires. The composition of Chinese Communist imports from the Free World will continue to be a function of industrial planning and it is unlikely that the Chinese Communists will permit an increase in the rate of consumer imports until such time as the more compelling demands of industrialization have been met. Increased exports to the Free World would be restricted for the most part to agricultural and raw material products. The Chinese portion of the Free World market for almost all commodities that Communist China exports (except vegetable oil and oil seeds) is relatively insignificant, and it is probable that the Chinese could increase the volume of exports of these products several times without encountering any serious softening of world prices.

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