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ECONOMIC INTELLIGENCE REPORT

**THE ECONOMY OF COMMUNIST CHINA
1958-62**



**CIA/RR 59-43
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Office of Research and Reports

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FOREWORD

This report describes the performance and prospects of the economy of Communist China during the Second Five Year Plan (1958-62). Information and conclusions about 1958, a year characterized by the great "leap forward" program for production and by the institution of the revolutionary new system of communes, are better founded than the estimates for 1959-62. Because the "leap forward" program emphasized the rapid increase of physical production almost without regard to human costs or to the proper balancing of inputs and outputs throughout the economy, previous benchmarks used by Chinese Communist planners as well as by Western analysts were swept away. Conclusions drawn about the last 4 years of the plan period, therefore, should be regarded as furnishing not a detailed blueprint but rather a general outline of present and future economic developments.

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THE ECONOMY OF COMMUNIST CHINA*
1958-62

Summary and Conclusions

From the economic point of view, 1958 was a remarkably good year for Communist China, even taking into account the fact that in some instances Chinese statistics on production far outstripped actual achievements. It is estimated that gross national product (GNP) rose, in what the Chinese leadership publicized as a great "leap forward," by about 20 percent compared with a rise of about 5 percent in 1957 and about 13 percent in 1956. This substantial rise in GNP was the result of a favorable year for agriculture; of the success of intensive efforts to increase the production of coal, iron and steel, and other industrial products; and of the coming into operation of a large amount of new plant and equipment. These impressive gains, however, were achieved at considerable human and economic cost.

Agricultural production in Communist China in 1958 was highlighted by an alleged doubling of the production of food grains from 185 million tons** in 1957 to 375 million tons in 1958. It is estimated, however, that the actual increase in the production of food grains in 1958 was much lower than claimed -- about 15 to 20 percent above the level in 1957. Because this increase was achieved partly at the expense of other crops, notably vegetables, the over-all increase in agricultural production probably was about 15 percent. To all but the zealously ambitious leaders of China, an increase of this magnitude is an important accomplishment and may even represent a breakthrough from the situation in which agricultural production during the First Five Year Plan (1953-57) barely kept up with the rapidly growing population.

Industrial production in Communist China in 1958 was marked by a supposed doubling in production of crude steel from 5.4 million tons in 1957 to 11.1 million tons in 1958. Only about 7.5 million tons of

* The estimates and conclusions in this report represent the best judgment of this Office as of 15 August 1959. After this report was written, the Chinese Communist government announced on 26 August 1959 important revisions in production figures for 1958 and in planned production figures for 1959. These new announcements in no way modify the major economic conclusions presented in the report. (For a brief discussion of the Chinese "reassessment," see Appendix C.)

** Tonnages are given in metric tons throughout this report.

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the 11.1 million tons, however, are estimated to have been converted into commercially usable steel. Most of the remainder of 3.6 million tons, which came from the primitive native, or backyard, furnaces that sprang up throughout the countryside, probably was remelted in modern furnaces or consumed by local handicraft industries. Similarly, production of coal was announced to be 270 million tons in 1958 compared with 130 million tons in 1957, but about 40 percent of the increase was a low grade of coal produced by native workings, and furthermore this native production may have been overcounted in comparison with 1957. It is believed that aggregate industrial production actually rose approximately 40 percent in 1958, in contrast to the claim of 66 percent.

The high priority given by the Chinese Communists to investment in heavy industry was demonstrated by the events of 1958. Investment was about 28 percent of GNP compared with 21 percent in 1957. Investment in industry was about 45 percent of total investment, and investment in heavy industry was about nine times investment in light industry. The major beneficiaries of industrial investment in 1958 were the fuels and basic materials industries such as the petroleum, steel, coal, chemical, and electric power industries.

Over-all consumption in Communist China in 1958 increased 8 to 10 percent above that in 1957, or 6 to 8 percent per capita, an increase which did little more than redress the decline in consumption that had taken place in 1957. One of the most striking features of this increase was how little it compensated for the greatly increased productive effort of the people, who needed considerably more nourishment just to maintain the pace. The consumer goods that increased most in availability during 1958 were basic foods (especially sweet potatoes), cotton cloth, and rubber footwear, but meats, eggs, and vegetables were in short supply, and the general quality of the diet was appreciably lowered.

The substantial increases in Chinese Communist agricultural and industrial production in 1958 brought about in the transportation sector of the economy serious difficulties, such as delays in the delivery of raw materials to the factories and of food to the cities and considerable congestion in railroad centers and in inland and coastal ports. Other costs to the economy were as follows: (1) the labor force was worked so hard with so little extra compensation that maintenance of the same work pace through 1959 seems to be unlikely unless enthusiasm and morale can be sustained and incentives increased by concessions to the widespread desire for more food and other consumer goods, (2) plant and equipment (including the rail network) at the end of the year were battered and worn as a result of the high tempo of production, (3) a significant part of the crops was lost through poor or untimely harvesting, and (4) the quality of much of the industrial production was poorer than usual.

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In short, any satisfaction derived by the Chinese Communist leadership from increases in production in 1958 would have to be tempered by recognition of the resulting serious imbalances in the economy, such as the lack of sufficient capacity in transportation to move all of the increased production, the lack of sufficient processing facilities to use the increased production, and the lack of an independent and experienced statistical organization to measure accurately and to account for the increased production. Certainly the increased tempo of economic activity in 1958 was not reflected in a similar advance in the welfare of the populace.

The great problems in the organization and control of the economy which resulted from the rapid but uneven increases in production of the "leap forward" program as well as from the need to maintain the momentum of the "leap forward" program led to the formation of communes -- the new monolithic political-social-economic units that are consolidating all previous controls at the local level under one tightly knit, semimilitary authority and are rapidly revamping the traditional patterns of daily life of the 660 million people of Communist China. Although introduced only in mid-1958, the communes spread so swiftly that by November 1958 Peking was able to claim that 99 percent of the rural population had been organized into 26,500 communes averaging about 4,750 households each. The momentum of the commune movement decreased, however, with the announcement in December 1958 of the necessity for an extended period of "tidying up." The resultant period of consolidation is continuing and has been marked by a number of modifications of the more extreme aspects of the original program.

In a few model communes in Communist China, harsh discipline and control over every facet of individual existence have brought to life George Orwell's 1984; in other communes the new order is merely on paper; and generally the situation falls between these extremes. Although the pressure toward the ultimate goal has varied, it nevertheless is believed to be inexorable. A major development that can be expected in the commune movement -- one that may well produce considerable unrest and resistance -- is the extension of the system to urban areas, but the urban areas will experience communal life only after the system becomes more thoroughly digested in the rural areas.

The temporary ideological breach with the USSR, caused by intemperate Chinese Communist claims that the communes represented a shortcut to Communism and placed Communist China in the vanguard of the march to that Elysium, was patched over when the original claims were watered down. The incident, however, illustrates a growing tendency of the Chinese leaders to depart from received (Soviet) doctrine in formulating economic policy. One ideological aspect of pure

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Communism that has made little headway under the commune system is the withering away of the state.

The importance to Communist China of the communes, from the economic point of view, lies in the following considerations: (1) the commune system, once consolidated, will increase the already great ability of the regime to allocate increases in output to investment and military activities rather than to consumption; (2) the commune system is a matchless device for increasing the ability of the central authorities to exercise control over small-scale economic activity (elements of private enterprise and "localism" now have an even slimmer chance of surviving); (3) the commune system makes more feasible both the elimination of inefficient, tradition-bound methods of production and the continuation of large projects that require the quick mobilization and movement of huge gangs of workers; and (4) the commune system gives the central authorities a considerably better opportunity to control the rate of growth of the population if they should wish to reverse the current Party Line, which holds that a large population is an economic asset.

Nevertheless, along with their advantages, the communes bring new difficulties and uncertainties into the situation facing the economic planners of Communist China. The elimination of traditional methods of production during the past decade has meant the loss of much household and local production that never saw the marketplace or entered into conventional statistics but yet was an important source of food, clothing, housing, and tools and utensils in rural areas. The communes face a difficult problem in organizing the many small-scale activities necessary for the production of these kinds of goods. The imposition of semimilitary discipline may prove to be inappropriate when individual craftsmanship and independence of decision appear to be necessary to maintain quality of output. The division of income so that energetic and skillful performance is encouraged presents a hard problem in both administration and finance -- for example, the proper compensation of peasants working in gangs on irrigation projects. The relations of communes to one another, including the maintenance of supplies of food and raw materials needed by other communes, remain to be worked out. The communes are now in an experimental stage, and their final form probably will not be standardized but will reflect the varying local conditions of climate and resources as well as the varying local experiences of the first year of operation. Already there have been departures from the extreme "ideal" concepts set down in the original blueprints. During the first half of 1959, for example, many commune messhalls were shut down, and rations again were issued on an individual basis. In many other instances the extreme forms of compulsion have been relaxed.

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The year 1959, according to Chinese Communist pronouncements, will witness another substantial economic advance, nearly equal in absolute if not percentage terms to the "leap forward" of 1958. It is believed that much of the momentum of 1958 will carry over through 1959 but that the new "leap forward" will be from a smaller base than claimed in official statistics. It is also believed that the Chinese problems mentioned above -- an intensively driven and poorly compensated labor force, a somewhat worn capital plant, a congested transportation system, a poor quality of production, the difficulty and uncertainties involved in the radically new system of communes, and a planning system which has to cope with grossly inaccurate data from important sectors of the economy -- have brought about the need for another period of slackening of pace and re-grouping of forces. The gamut of economic problems must be dealt with, say the leaders, like a "coordinated chess game." The exact degree to which it has been necessary to slacken the pace of economic expansion in order to get the chess pieces coordinated is hard to estimate, and the sparse midyear economic report for 1959 gives few clues. In August 1959 the regime instituted a new program of exhortation, aimed at eliminating the "hardship-evading and laxity sentiments" of rightists who have overdone the slackening of pace.

One of the grosser examples of waste arising out of the frenetic "leap forward" of 1958 had been the much-publicized construction of tens of thousands of native furnaces for small-scale production of iron and steel. At the beginning of 1959 it was publicly admitted that these furnaces, which had turned out only low-grade iron and steel at a tremendous cost in raw materials and labor, generally were being shut down.

The over-all economic gains of 1958 are so striking that it is now estimated that the GNP of Communist China will rise about 65 to 85 percent during the Second Five Year Plan (1958-62) compared with an increase of 43 to 48 percent during the First Five Year Plan (1953-57). As a result, the period of time that it should take China to catch up with Japan and the UK as an industrial power has been considerably shortened.

The most dramatic feature of the last 4 years of the Second Five Year Plan may prove to be tremendous increases in the production of major industrial commodities, increases which would have been dismissed by Western observers as inconceivable before the "leap forward" of 1958. It is now believed, for example, that the Chinese Communists may be able to raise production of crude steel as high as 20 million to 25 million tons in 1962 compared with 5.4 million tons in 1957 and an original plan goal of 10.5 million to 12 million tons. In spite of such potential gains in some branches of industry the economy of

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Communist China will remain essentially agricultural because of the weight of the past. Growth in GNP will continue to go mostly to investment in heavy industry, and the margin between consumption and bare subsistence for the population will remain uncomfortably small.

I. Background of the "Leap Forward" Program of 1958

A. Dissatisfaction with the Pattern and Rate of Economic Development

The events of 1958 show that the Chinese Communist leadership was dissatisfied with the rate of economic development during the period of the First Five Year Plan (1953-57). The economic program for this plan was a close imitation of the Soviet pattern of economic development, and the leadership's dissatisfaction ultimately led to important modifications of the Soviet model and to the adoption of a program more relevant to actual conditions in the Chinese economy. Important differences in the Chinese situation compared with that in the USSR are the huge population, the thin margin between consumption and bare subsistence (or even starvation), the small size of the industrial plant and transportation facilities, and the willingness and ability of the regime to extract from the populace a productive effort that is intense even by Soviet standards.

The changes introduced in 1958, however, were not based on the assumption that the program for 1953-57 had been a failure. On the whole, the period of the First Five Year Plan had been one of rapid growth. It is estimated that the average annual rate of increase in GNP was between 7 and 8 percent a year. (The Communist leadership believed that the annual rate of increase was approximately 9 percent.) Most of the targets of the First Five Year Plan had been achieved in 1956, 1 year ahead of the plan. Socialization of all sectors of the economy had been rapidly accomplished with relatively little dislocation in production. Nevertheless, stresses and strains had developed which had led to retrenchment and consolidation in 1957, and the regime decided that the pace of economic development must be accelerated and that new economic policies would be required in the period of the Second Five Year Plan (1958-62).

1. Lag in Agriculture

Agricultural production increased during the period of the First Five Year Plan in Communist China at an average annual rate of

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2 to 3 percent. Although this increase was not in itself a bad showing, there were great pressures on the regime to secure a significantly higher rate of increase. First, production of the basic food crops had increased barely as much as the increase in population (estimated to be 2.0 to 2.5 percent a year), and the pressure of population on the food supply continued to disturb the Communist planners.* Second, production of industrial crops such as cotton had increased during the period but with considerable variations in production from year to year. These fluctuations in crops resulted in sharp variations in the production of light industry, and because state profits and taxes from light industry and trade were heavily relied on to finance state investment, these variations strongly affected the financial aspects as well as the physical volume of state investment.

As a result of trends in agriculture, per capita consumption had not increased significantly during the first 3 years of the plan period. A substantial increase of 9 to 10 percent in per capita consumption in 1956 took place, in large part at the expense of a sharp decline in stocks, and per capita consumption declined by 2 to 4 percent in 1957 from the level in 1956.

2. Difficulties in Investment

The First Five Year Plan in Communist China was based on a rapid expansion of the resources allocated to the program of industrialization while the demands of agriculture and the consumer were pushed aside as much as possible. State control over industry and trade, state control over prices and taxes, and state rationing of key consumer goods were used to limit increases in consumption as output increased. State investment in turn was channeled predominantly to heavy industry. The main portion of investment in agriculture was to be of a nonmechanized and labor-intensive type and was to be undertaken by the farm population itself. This early departure from the Soviet model, which called for the production by industry of large amounts of heavy agricultural equipment, was made necessary by the limitations of Chinese Communist industrial capacity.

State capital investment increased steadily from 1952 through 1955 and increased by 62 percent in the single year 1956, an increase very close to the 70-percent increase subsequently claimed for 1958 during the "leap forward" program. The high level of investment in 1956, occurring at the same time that it was necessary to raise incomes of workers and peasants, caused inflationary pressures and shortages of construction materials. In 1957, state investment declined by 10 percent, and the proposals for the Second Five Year

* For a discussion of the relationship between population and food supply in Communist China, see Appendix B.

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Plan made in this period of retrenchment and consolidation called for holding the percentage of total production allocated to state investment close to the percentage that prevailed in 1957.

In agriculture, difficulties were encountered in the policy of relying on nonbudgeted investment by the farm population itself as a basis for increasing agricultural production. During the rapid socialization of agriculture in 1956 the regime found it necessary to increase the level of consumption in the rural areas and was forced to finance farm investment largely through sizable bank loans. A limited program for introducing two-wheeled plows resulted in large unused stocks, because peasants could not be cajoled into using these plows. Many of the wells drilled for the irrigation program proved unusable. The sown acreage increased to such an extent that it could not be maintained adequately, and the targets for sown area in 1957 were reduced accordingly. In the light of these developments the planners were forced into radically new approaches to the problems of increasing agricultural production and changing priorities in order to allocate a substantially larger proportion of investment to agriculture at the expense of investment in heavy industry.

In heavy industry, Communist China followed closely the example of the USSR, with the emphasis on construction of capital-intensive, large-scale plants. The large state investment in heavy industry was in itself capital intensive in nature because heavy industry required more capital equipment than agriculture or handicrafts required and because investment in industry was aimed at large increases in the amount of capital available per worker. Fixed assets in industry more than doubled during 1952-57, while the total number of employees in industry increased by about 35 percent. These increases in fixed industrial assets permitted large increases in production per worker, reduced the rate of increase in the consumption requirements of the nonagricultural population, and contributed to easy assimilation of Soviet aid. The program, however, was not adapted to take full advantage of the large annual additions to the labor force, nor did it direct sufficient investment into the handicraft sector, which had a labor force fully as large as that in the industrial sector. This investment program also was not the most effective way to maximize production of the domestic machine building industries, which had the ability to turn out large numbers of relatively simple types of machinery and equipment but were not so well equipped to produce the more complex types of machinery and equipment.

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3. Problems in Foreign Trade

During the First Five Year Plan in Communist China, about 40 percent of the machinery and equipment required for state investment was imported, and because Soviet economic credits were not large in relation to import requirements, these imports had to be financed in large measure through exports. The value of exports in 1956 was double the value in 1952, but state investment had increased to nearly four times the level of 1952. The value of exports in 1957 declined somewhat, and it became clear that further increases in exports would be small in relation to the potential demand for foreign exchange that had been brought about by the investment program. At the same time, in 1956, China became a net exporter of goods as Soviet loans dropped to negligible amounts and large annual repayments were required on past Soviet loans, most of which were extended for military purposes. In view of this trend, it was clear that any substantial increases in investment above the level in 1956 would have to depend on domestic resources and that foreign trade could not be expected to play an increasing role in the economic development of China.

B. Economic Policies in 1957 and 1958

In view of these trends during the First Five Year Plan the Chinese Communist regime in 1958 embarked on an all-out program for greatly increasing the already intense pace of production. The new program did not involve canceling or cutting back the investment program and other economic programs established during 1953-57 -- in fact, the construction of large-scale industrial projects was accelerated in 1958. Although the general framework of investment and fiscal and price policies during the First Five Year Plan was to continue, a new effort was to be undertaken parallel to the existing program. The Communist sloganmakers described the new policy as "walking on two legs," with one "leg" to be the type of program on which, by implication, they had been "hopping along" during the period of the First Five Year Plan and the second "leg" to be a new program aimed at a greater utilization of China's abundant manpower by emphasizing a thoroughgoing mobilization of labor and its employment at a backbreaking tempo.

1. Factors Favoring Large Increases in Production in 1958

Even with no change in economic policies, production in Communist China was likely to increase in 1958 at a rate much closer to the 12-percent to 13-percent increase in GNP achieved in 1956 than to the 5-percent increase achieved in 1957. Production of cotton and other industrial crops, which constituted the supply of raw materials for light industry in 1958, had increased significantly in 1957. With

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the leveling-off of consumption and the slight decline in capital investment in 1957, stocks of both consumer goods and producer goods increased substantially, more than enough to offset the decline in 1956. Because the level of state investment in 1956 and 1957 was much higher than in 1953-55, significant increases in capacity for key industries could be expected in 1958, when a larger number of projects were scheduled for completion.

2. Changes in Economic Policies

The central premise of the changes in economic policies and of the divergence from the Soviet model used for the First Five Year Plan in Communist China is that the huge and rapidly growing population of China could be converted from a liability to an asset. A growing concern about this increase in population led to official emphasis in late 1956 and early 1957 on birth control and limitations on the natural increase in the population. With the new policies, this emphasis changed. Liu Shao-ch'i put the main target of the new program succinctly when -- speaking of those who argued that growth of population was jeopardizing the whole economic program -- he said: "All they see is that men are consumers and that the greater the population, the bigger the consumption. They fail to see that men are first of all producers and that when there is a large population there is also the possibility of greater production and more accumulation." The new program, therefore, aimed at labor-intensive programs which would use more fully both the existing underemployed labor force of China and the large annual increments to the labor force.

In order to make more effective use of the underemployed farm population, the regime launched a massive effort to increase the crop area under irrigation. The Chinese Communist estimate of the rural manpower required for the irrigation program during October 1957 - September 1958 is equivalent to more than one-fifth of the total potential manpower of the farm population. Taking into account the other demands on the peasants' time aside from agriculture -- such as the time needed for household duties, for handicraft and other subsidiary production activities, and for normal leisure -- such a program would in itself be more than sufficient to eliminate the underemployment that had previously existed in the rural areas. In addition, many campaigns, such as deep plowing and other programs, increased the amount of labor used in cultivating the main crops.

In order to employ more fully the labor force engaged in handicrafts and to expand local sources of raw materials for industry and for local construction, the program called for a new emphasis on local industry and on small-scale and native methods of production.

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The regime accordingly widened the scope of responsibility of local administrative organs in order to carry out the program. By June 1958, approximately 80 percent of the industrial enterprises under the ministries of the central government (enterprises which contributed, however, much less than 80 percent of total industrial production) were said to have been transferred to various local levels. A "two-account system" of planning was set up in which local enterprises and lower levels in the economic hierarchy were pressed into setting up new plan figures which were always higher than those set by the central government and which became the new targets for output. The procedure called for a much larger role for the local governments in the formulation of production goals and a larger role for the Communist Party members at all levels. At the same time that the existing program for large-scale, capital-intensive construction projects was continued and, in most instances, even accelerated, investment funds for small-scale projects were increased substantially. The First Five Year Plan had called for a total of 2,300 below-norm* projects. During 1953-57, before the new program was fully underway, about 9,000 below-norm projects were said to have been completed or under construction, nearly four times the number originally scheduled under the First Five Year Plan. The number of above-norm projects said to be completed or under construction increased by only 30 percent in comparison with those scheduled in the First Five Year Plan. This large increase in the number of below-norm projects planned in the 5-year period apparently resulted from the increased interest with which the regime had begun to view the construction of medium-scale and small-scale industrial facilities by local authorities at the end of 1956.

In addition to continued emphasis on medium-scale and small-scale production, in mid-1958 the regime very strongly encouraged the establishment of thousands of small-scale industrial facilities using native and traditional methods of production. For example, backyard production of steel had become a national fetish in the fall of 1958, and the press gave widespread publicity to similar programs for chemical fertilizer and shale oil.

The new emphasis on local industry and native methods of production was calculated to take advantage of the potential for labor-intensive industrial production and also was aimed at increasing output of raw materials and construction materials from sources at the local level. Because of difficulties in organizing control over thousands of small-scale projects, imbalances and inefficiencies in production were inevitable. In addition, this new program resulted in large commitments of labor, raw materials, and transportation facilities in competition with the requirements of the ministries of the central government.

* The term norm refers to a value for each industry which determines whether or not a project is large enough to come under the complete supervision and control of the central planning organs.

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3. Raising of Production Goals

The national plan of Communist China for 1958, as issued in February 1958, contained relatively conservative targets, but as these new economic policies took effect, a snowballing of targets for agricultural and industrial production resulted. Few claims of increases in agricultural production were made by the regime until early July, when the regime announced that the harvests of winter wheat, rape, and barley and the expected harvest of spring wheat and early rice would be 80 percent higher than that for the same period in 1957. By late summer 1958, claims were being made that total production of staple food crops and cotton would be double that of 1957.

As late as May 1958, targets for industrial production bore some resemblance to the probable capabilities, but repeated pledges to "struggle" to exceed targets on local levels resulted in the official announcement in August 1958 of new targets far in excess of those of February 1958. By midsummer the official policy of encouraging construction of small-scale and native plants had resulted in a tremendous proliferation of such facilities, which in turn encouraged the publication of increased targets for production.

II. "Leap Forward" Program of 1958

An evaluation of the actual performance of the Chinese Communist economy in 1958 -- a year characterized by government spokesmen as a great "leap forward" -- is difficult because of the pronounced deterioration in the reliability of Chinese statistics in 1958, primarily those covering the agricultural and handicraft sectors.* The estimates in this report have discounted in large measure claims for increases in agricultural production during 1958 and to a lesser extent claims for increases in handicraft production. The problems created by the changes in the official statistics introduce a large range of error into the estimates for 1958, but the available evidence -- including official claims, articles in Chinese journals and newspapers

[redacted] is believed to be sufficient to establish the conclusions presented in this report about the performance of the Chinese economy in 1958.

50X1
50X1

A. Performance

In 1958 the GNP of Communist China increased by approximately 20 percent compared with 1957, more than twice the average annual rate

* For a general discussion of the deterioration in the reliability of Chinese Communist statistics in 1958, see Appendix A.

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of the First Five Year Plan and well above the 13-percent increase that occurred in the best year of that plan period, 1956.* The increase in 1958 was more than one-third of the total increase in production achieved during 1953-57.** Even after allowing for a tremendous distortion in the claimed increases in agricultural production, it is clear that both agriculture and industry showed substantial increases -- a situation which was not true for any year of the First Five Year Plan. The large increase in agricultural production in 1955, after a very poor performance in 1954 caused by serious floods, was not matched by large increases in industrial production in that year. In 1956, however, the very large increase in industrial production was accompanied by only a small increase in agricultural production.

1. Agriculture

The significance of trends in agriculture in Communist China in 1958 is obscured by the fantastic claims made by Chinese officials. Production of the main food crops and cotton is claimed to have doubled.*** It is interesting to note that Chou En-lai in his speech to the Second National Peoples Congress in April 1959 stated that even an annual increase in agriculture of between 10 and 20 percent was a "leap forward." Chou's range covers the estimate made in this report of an increase of about 15 percent in agricultural production. This estimate of about 15 percent is far below the claimed increase of 64 percent in the gross value of agricultural production. The official claims for 1958 state that production of basic food crops was double that of 1957, but it is estimated that the increase actually was about 15 to 20 percent. The percentage increase in agricultural production in 1958 is roughly equivalent to the total increase in agricultural production during the entire First Five Year Plan, if 1957 is compared with 1952. The percentage increase in industrial production in 1958 is, by contrast, about one-third of the total increase in industrial production during the First Five Year Plan.

* For the GNP of Communist China for 1957-58, allocated by end use in current prices, see Table 1, Appendix D, p. 62, below. For the GNP allocated by sector of origin, see Table 2, Appendix D, p. 63, below.

** A comparison of Communist China's GNP and production of selected commodities with those of various industrial nations is shown on the chart, Figure 1, following p. 14.

*** For the estimated production of selected agricultural commodities for 1952 and 1957-58, see Table 3, Appendix D, p. 64, below.

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a. Main Food Crops

The government of Communist China claims that in 1958 production of basic food crops -- wheat, rice, sweet potatoes, and miscellaneous food crops -- was 375 million tons, double the 185 million tons of 1957. An increase of such magnitude in 1 year is almost incredible, and there are many reasons for not accepting this claim at face value.

As late as May 1958 the target for production of basic food crops was 196 million tons, an increase of 6 percent above the level in 1957. By September, production for 1958 was estimated to be 350 million tons, and by November this estimate remained at 350 million tons. But the estimate of rice production meanwhile had dropped from 180 million tons to 160 million tons and then to 150 million tons, implying a claimed increase in miscellaneous food crops from 25 million to 45 million and then to 55 million tons. The total production of basic food crops was claimed to be 375 million tons in December and January, but the figure for sweet potatoes was lowered again, implying a further increase in the output of miscellaneous food crops. Such changes indicate a manipulation of subtotals to maintain an over-all total rather than a careful estimate of each separate crop.

Reports of observers traveling in Communist China do not support the claims of very high yields, nor do they supply evidence of the great increase in grain storage that would be necessary if such high levels of production had in fact been achieved. Reported shortages of food in the cities were due in part to transportation difficulties but, taken in conjunction with continued reports from some areas that peasant consumption remained below consumption in urban areas, indicate that the alleged doubling of production was not being reflected in large increases in food supply. Moreover, procurement of grains was claimed to be up only 24 percent, a claim which was almost a tacit admission by the regime that the total of 375 million tons had not in fact been achieved.

It is claimed that the average yield per hectare of rice increased by 60 percent, of wheat by 76 percent, and of sweet potatoes by 210 percent. If these claims were accepted, they would involve an average rice yield about the same as in Japan and the US and an average wheat yield that is about the same as average yields in the US and only one-fourth less than those in Japan. In both Japan and the US, however, large quantities of chemical fertilizer and pesticides are used -- much more than the small amounts available in Communist China in 1958 -- and yields in Japan and the US reflect many decades of steady improvement in agricultural techniques. It is most unlikely that such increases could be achieved in the space of 1 year over such a vast area as China.

Figure 1

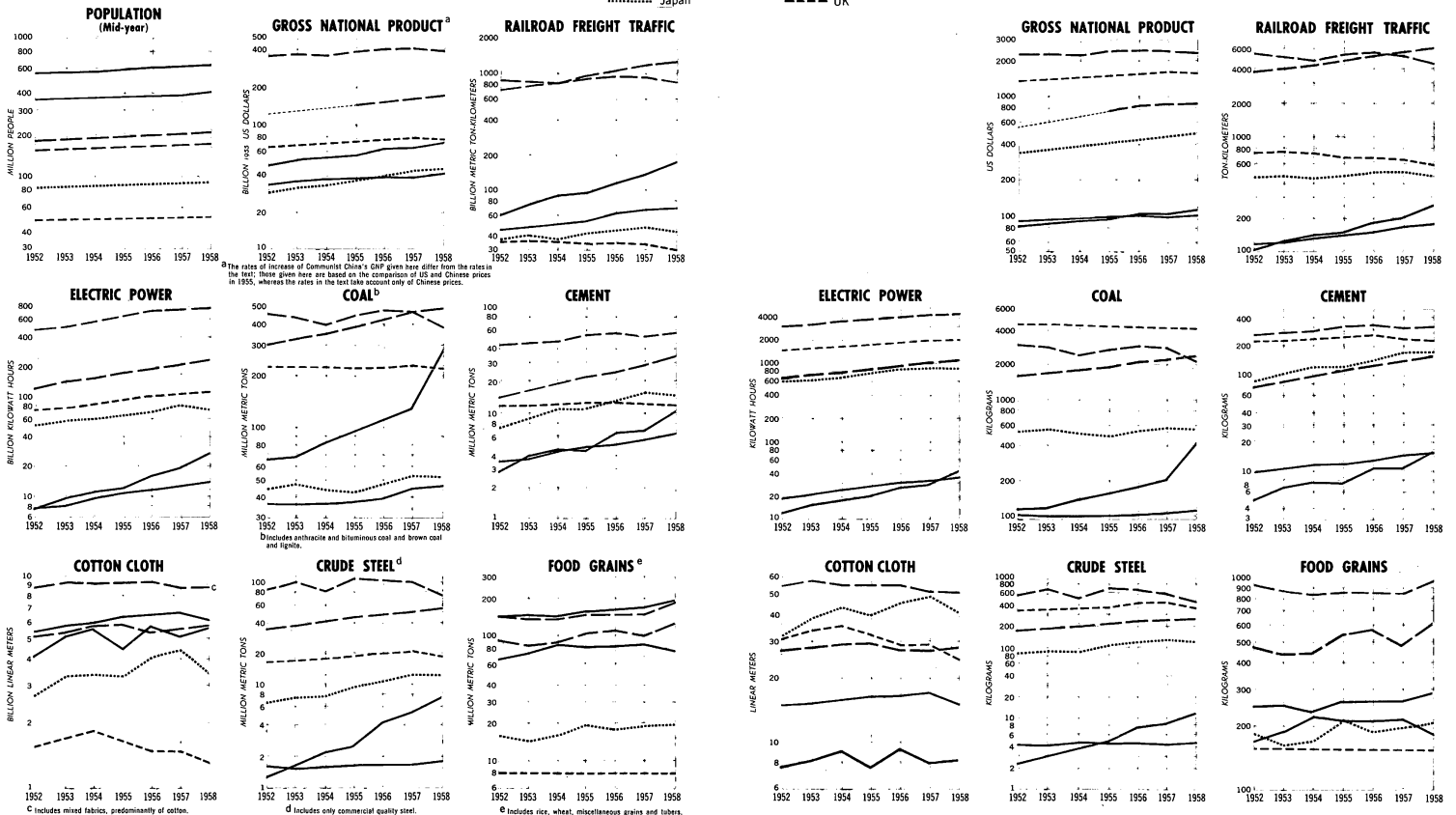
COMMUNIST CHINA GROSS NATIONAL PRODUCT, RAILROAD FREIGHT TRAFFIC, AND PRODUCTION OF SELECTED COMMODITIES, COMPARED WITH THOSE OF SELECTED COUNTRIES, 1952-58

TOTAL

— Communist China
— USSR
- - - Japan

— India
— USA
- - - UK

PER CAPITA



^aThe rates of increase of Communist China's GNP figures here differ from the rates in the text; these given here are based on the comparison of US and Chinese prices in 1955, whereas the rates in the text take account only of Chinese prices.

^bIncludes anthracite and bituminous coal and brown coal and lignite.

^cIncludes mixed fabrics, predominance of cotton.

^dIncludes only commercial quality steel.

^eIncludes rice, wheat, miscellaneous grains and tubers.

Data plotted on semi-logarithmic grid.

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In estimating the actual level of agricultural production in Communist China in 1958, therefore, it has been necessary to work in large part independently of the official claims for 1958. The production of basic food crops in 1958 is estimated to have been roughly 220 million tons, with the increase in production about 15 to 20 percent above that in 1957, or only about 15 to 20 percent of the increase claimed in the official statistics. This estimate is based on (1) the Chinese Communist figures for sown acreage, (2) estimates of increases in average yields resulting from increased application of chemical fertilizer and improvements in crop cultivation, and (3) an allowance for the effect of unusually good weather conditions in 1958.

The acreage sown to basic food crops in 1958 is not claimed to have increased significantly compared with that in 1957, but it is claimed that there has been a pronounced shift to sweet potatoes and a lesser shift to corn, taking over primarily acreage formerly sown to wheat and other miscellaneous grains with lower average yields. These state-sponsored shifts alone would result in an increase in production of basic crops of nearly 4 percent above the level in 1957 with no changes of average yields per acre of individual crops. The total figure claimed for sown acreage, unlike the claims for average yields, is probably conservative. Because Communist cadres were expected to show results in increasing yields, it is possible that a small part of the fantastic gains claimed for average yields in 1958 is attributable to some understatement of sown acreage in 1958.

The increased application of chemical fertilizer from large-scale industry in 1958 is estimated to have been sufficient to raise output of basic food crops by not more than 1 percent. The evaluation of increases in average yields in 1958, therefore, must depend in large part on the successes and failures of the ambitious agricultural programs undertaken. First of all, the irrigated area was claimed to have been raised from about 30 percent of the land under cultivation in late 1957 to about 60 percent in 1958 -- an increase more than double that claimed for the 5 years 1953-57. Second, it is claimed that 80 billion tons of natural fertilizers such as manure and pond mud were accumulated in 1958 and that application of such fertilizers was more than 10 times the application in 1957. A large increase in chemical fertilizer produced by native methods also is claimed. Third, deep plowing and close planting were greatly extended, and introduction of improved seeds and greater use of insecticides are cited in connection with the spectacular increases in yields shown in the Communist figures of production. The irrigation program as claimed was on such a scale that it could not have been carried out efficiently in the short space of 1 year, as subsequent admissions in

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mid-1959 indicated. In any event, much of the irrigation program would show benefits only in later years by reducing losses resulting from adverse weather. The accumulation of natural fertilizers claimed is believed to be overstated and is heavily discounted, for most of such fertilizers have a very low nitrogen content. The deep plowing and close planting programs are considered to be of little value in increasing agricultural production. Nevertheless, it is estimated that the agricultural programs undertaken in 1958 probably raised the average yield of wheat to the level that existed in pre-Communist times and raised the average yield of rice by 5 to 6 percent. These measures may also have obtained small increases in yields for miscellaneous grains and tubers. Therefore, these improvements are estimated to have increased total production of basic food crops by about 7 to 10 percent in comparison with production in 1957.

In addition to increases achieved by shifts in the sown acreage and by agricultural measures undertaken to increase average yields, an allowance must be made for unusually favorable weather. The Chinese Communists claim that 1958 was a poor agricultural year, but neighboring countries in Asia had notable increases in grain production. It is usual for Communist planners to blame the weather when agriculture fares poorly and to credit their own efforts when agriculture registers increases in production. It is estimated, therefore, that weather conditions actually were quite favorable in 1958, and thus there is allowed an average increase of 5 percent above the figure that would have been the average yield for all basic food crops in 1958. These considerations suggest that, instead of doubling, the production of basic food crops increased by approximately 15 to 20 percent in 1958.

b. Other Crops

Production of cotton and most other industrial crops in Communist China in 1958 increased much more rapidly than production of basic food crops, and the percentage increase in many of these crops is estimated to be twice the percentage increase that occurred during the whole period of the First Five Year Plan. Production of vegetables, meat, and other supplementary foods suffered, however, because of the emphasis on the main crops, and their production in 1958 either failed to show appreciable increases or actually declined.

c. Value of Over-All Agricultural Production

Based on estimated farm procurement prices in Communist China, the value of production of basic food crops, industrial crops, and their byproducts and elementary food processing in farm areas is estimated to have increased by 20 to 25 percent in 1958. A similar

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increase probably took place in forestry, fishing, and farm production of producer goods. These categories constituted roughly two-thirds of total output in 1957. Some increase in the total numbers of livestock probably occurred, but vegetables, livestock products, and farm supplementary production of consumer goods at best held their own in 1958. The increase in over-all agricultural production during 1958 probably falls in the range of 13 to 17 percent and is considered in this report to be about 15 percent.

2. Industry

Industrial production in Communist China showed an increase of approximately 40 percent in 1958, about one-third of the percentage increase that was achieved in the whole 5-year period 1953-57 and somewhat greater than the increase achieved in the banner year 1956. In 1958, industry continued to grow at about twice the rate of over-all GNP at factor cost. In spite of this rapid growth, however, industry contributed only one-fifth of total GNP* in 1958 (less than one-half the share of agriculture), which reflects the low base from which it has grown. Production of light industry increased by about 20 percent and that of heavy industry by about 60 percent. The official claim was that the gross value of all industrial and individual handicraft production in 1958 was 66 percent above that in 1957; the scaling down of this claim was considerably less than the scaling down of the regime's claims for basic food crops.

Claimed increases in the unit production of industrial commodities cannot be reconciled with the 66-percent increase claimed for the gross value of industry. The figures for gross value in 1958 probably reflect exaggerations caused by the inclusion of production previously unrecorded and by greater double counting in the accounting framework used by industrial enterprises, particularly in local industry and handicrafts. The estimate in this report of an increase of 40 percent in gross value in 1958 is based on the construction of an index that employs 1957 prices and on the claimed increases in production in physical units. Because similar estimates for 1953-57 are consistent with official claims for these years, the figure of 40 percent is believed to be a sound estimate for 1958.

a. Iron and Steel

Production in the large and medium-sized plants of the iron and steel industry in Communist China increased substantially in

* Estimates of GNP by sector of origin for 1952, 1957, and 1958 are shown on the chart, Figure 2, following p. 18, and in Table 2, Appendix D, p. 63, below.

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1958, but the all-out drive for increased production of pig iron and steel through small-scale methods yielded a product of limited usefulness. About 11 million tons of crude steel were produced in 1958, more than double the 1957 output of 5.35 million tons.* Crude steel that could be converted into finished steel meeting minimum standards of commercial acceptability totaled about 7.5 million tons, an increase of more than 40 percent in comparison with the figure of 5.4 million tons for 1957. Most of the remainder, amounting to 3.6 million tons, probably was remelted in conventional furnaces or was consumed by local handicraft industries. Expansion in the production of steel in 1958, although considerable, did not provide sufficient finished steel to meet domestic requirements. Because finishing capacity was insufficient to process all the crude steel produced, approximately 1 million to 2 million tons of crude steel were stockpiled. Imports of finished steel were tripled, from 500,000 tons in 1957 to 1.5 million tons in 1958. In line with the "leap forward" program of 1958, the construction of all modern iron and steel plants was accelerated, and the scheduled completion dates of large installations at An-shan, Wu-han, and Pao-tou were shortened. The small native furnaces, which sprang up throughout much of the countryside in 1958, fell out of favor and were discontinued toward the end of the year when it became apparent that most of them represented a highly uneconomic use of labor and raw materials.

b. Fuel and Electric Power

The production of coal in Communist China expanded more than 100 percent in 1958, from 130 million tons to 270 million tons, making China the third largest producer in the world, after the US and the USSR. The entire period of the First Five Year Plan was required to accomplish a similar percentage increase.** The output of mines under the control of the central and provincial governments contributed about 60 percent of the total increase. The remaining 40 percent came from native workings, representing a tenfold increase in coal from mines of this type. Coal from native mines is used almost entirely for rural household needs and as fuel for native types of blast furnaces, for oil plants, and for other small installations. The accomplishments of the electric power and petroleum industries were less spectacular than those of the coal industry, but the groundwork apparently has been laid for increases in production for these two industries through the construction of new capacity in 1958.

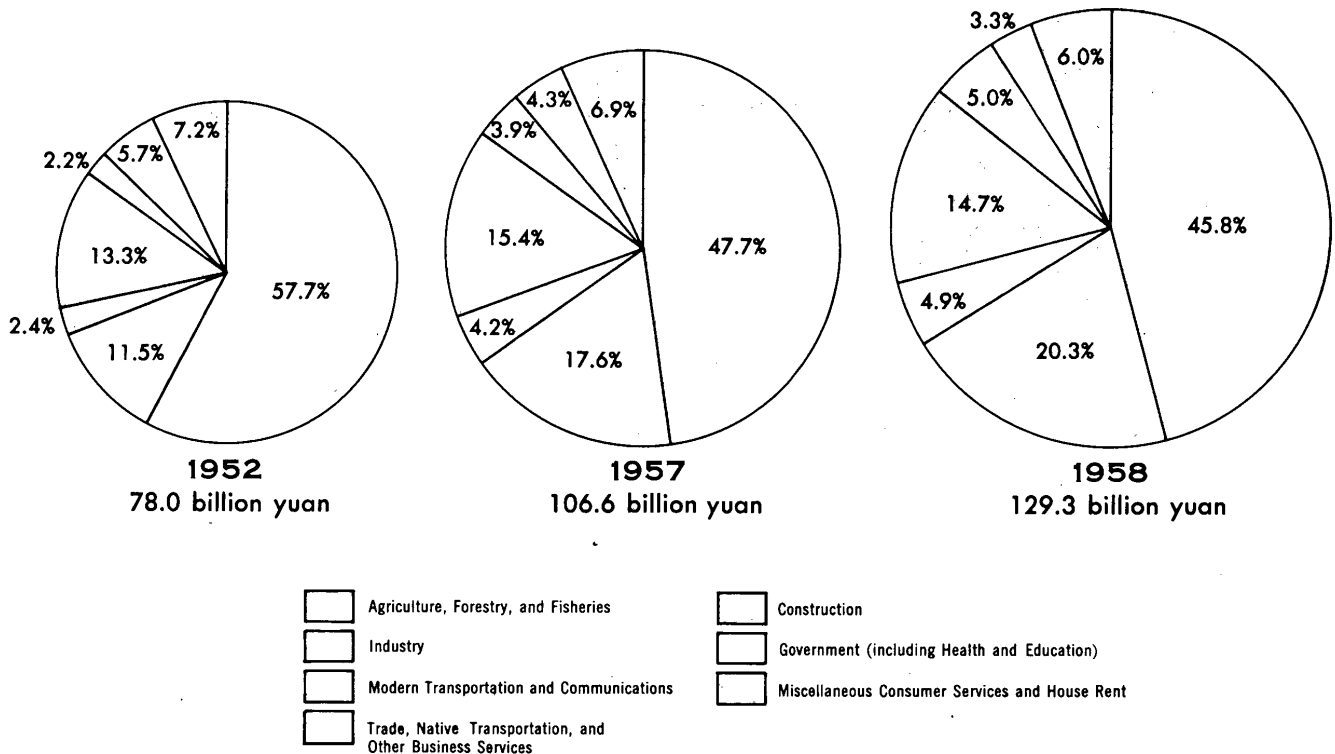
* For the estimated production of ferrous and nonferrous metals for 1952-59, see Table 4, Appendix D, p. 65, below.

** For the estimated production of fuels, power, and construction materials for 1952-59, see Table 5, Appendix D, p. 66, below.

GROSS NATIONAL PRODUCT, BY SECTOR OF ORIGIN

1952, 1957, and 1958

(1957 Constant factor prices)



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c. Machine Building Industries

Considerable advances were made in machine building in Communist China in 1958 -- for example, production of machine tools from the more highly organized machine building industries nearly doubled, rising from 28,000 units in 1957 to 50,000 units in 1958.* This sector benefited from the large investments undertaken during the period of the First Five Year Plan and from the change in investment policies which, under the "leap forward" program of labor-intensive investment, called for a much larger output of simpler types of machinery and equipment for use in agriculture and in local industry. In addition to the large increase in output from the organized sectors, native producing units are claimed to have greatly increased the production of crude tools and machines. Because of the low quality and limited utility of the products of the native producing units, it is believed that local production of machine tools will be increasingly concentrated in well-equipped, medium-sized plants.

d. Chemicals

The chemical industry in Communist China has expanded rapidly, but not nearly in proportion to the demands placed on it. Output of chemical fertilizers increased by more than 60 percent in 1958 above the level in 1957, about double the average annual rate of growth during the First Five Year Plan, but production in 1958 of 1.3 million tons of chemical fertilizers is still small in relation to the total area under cultivation.** The chemical industry was particularly weak and undeveloped at the beginning of the First Five Year Plan, and the industry was given inadequate investment priorities in the first few years of the plan. In early 1957, however, the Chinese Communists recognized the need for rapid expansion in the production of chemicals, especially of chemical fertilizers, as part of a great emphasis on agricultural development and a recognition of the chemical industry's importance in developing a large industrial base.

3. Transportation

The "leap forward" program placed a heavy burden on the transportation system of Communist China.*** Rail and other modern

* For the estimated production of selected machinery and electrical and communications equipment for 1952-59, see Tables 6 and 7, Appendix D, pp. 67 and 68, respectively, below.

** For the estimated production of chemical products for 1952-59, see Table 8, Appendix D, p. 69, below.

*** The railroad system and major highways of Communist China are shown on the map, Figure 3, inside back cover.

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types of transport, operating at about 100 percent of capacity, hauled approximately 229 billion ton-kilometers (tkm), an increase of 39 percent in comparison with the level in 1957, and originated 633 million tons of freight, an increase of 48 percent compared with that in 1957.* Even performance of this magnitude proved inadequate, however, to handle all the demands made on the transportation system. Modern transport probably provided sufficient support to production by large-scale industry but fell behind the increased demands of state investment and even further behind in supporting the programs for agriculture and for increasing local industrial production.

The effort put forth by native transport during 1958 was truly staggering, with native land transport facilities allegedly moving 529 million tons of goods, an increase of more than 44 percent in comparison with the level in 1957. Junks and other native craft (both inland and coastal) are estimated to have moved 134 million tons, an increase of about 35 percent in comparison with the level in 1957. A portion of the increase in 1958 may be accounted for by more complete statistical reporting, which has given the Chinese Communists a fuller count of the amount of traffic carried by native forms of transport. In many rural areas, transportation between farms during the latter part of 1958 absorbed about 30 percent and sometimes 60 percent of the labor force, and there were cases in which 70 percent of the total available labor was temporarily used in transportation to support the small native blast furnace program. The commitment of such a great proportion of the rural labor force to this largely unprofitable economic program probably is the reason why some agricultural crops went unharvested.

The priority given to heavy industry in the use of both modern and native types of transport in 1958 resulted in disruption of the established patterns of distribution of consumer goods. This disruption contributed to serious food shortages in some urban areas; to a decline in exports, which took place at the very end of 1958 and early 1959; and to occasional interruption of the movement of raw materials to industries with low priority.

4. Trade and Agricultural Procurement

Domestic trade in Communist China grew faster than planned but still at a rate well below that of industry and transportation. Retail trade increased about 16 percent compared with a planned increase

* For the estimated volume and performance of modern transport and the estimated production of transportation equipment for 1952-59, see Tables 9 and 10, Appendix D, pp. 70 and 71, respectively, below.

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of 5 percent. Sales of producer goods for agriculture, small industry, and local construction approximately doubled, accounting for at least one-half of the total increase in retail sales. Sales of consumer goods to households increased by approximately 8 percent, about one-half of the increase registered in the banner year of 1956.

State procurement of agricultural commodities increased at about the same rate as agricultural production of these commodities. Indications are that the state trade probably took control of about the same share of agricultural production as that controlled during 1955-57.

5. Foreign Trade

The foreign trade sector in Communist China made a notable contribution to the economy in 1958, with total trade rising 23 percent in comparison with the previous year in a period when total world trade declined by more than 6 percent. The goal for foreign trade was exceeded by 14 percent as foreign trade totaled an amount estimated to be \$3,770 million,* about 20 percent greater than the total in 1956, the previous high. After a slight decline in foreign trade in 1957, the tremendous expansion in 1958 considerably brightened the foreign economic position of China.

A record export surplus in 1958 enabled Communist China to meet a 20-percent increase in debt repayments on Soviet loans and to continue to expand the level of imports of plant and equipment from the USSR, the European Satellites, and Western Europe. There was a substantial decline in foreign aid expenditures in 1958, but the size of the planned expenditures on foreign aid in 1959 suggests a postponement in foreign aid deliveries. It is estimated that exports rose 30 percent in 1958, to 6,950 million yuan.** Agricultural products continued to dominate China's exports. Mineral and industrial products, however, were an increasing proportion of China's total exports, rising from 22 percent in the First Five Year Plan to 28 percent in 1958.

It is estimated that Chinese Communist imports rose 16 percent in 1958, to 5,780 million yuan. Investment goods, primarily machinery and equipment for state construction projects, account for

* Dollar values in this report are expressed in current US dollars.

** Unless otherwise indicated, yuan values in this report are expressed in current yuan and may be converted to US dollars at the rate of 2.46 yuan to US \$1. This rate of exchange is based on the yuan-sterling rate for telegraphic transfers and bears no relationship to domestic price levels.

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more than half of China's imports. To meet the needs of a rapid expansion of production and construction, the USSR made deliveries ahead of schedule on Chinese orders for selected investment goods, such as the No. 1 blast furnace for the Wu-han steel complex. Moreover, 20 complete sets of equipment for metallurgical, machine building, power, and coal processing plants were reported to have been delivered by the USSR in the first 10 months of 1958. Nevertheless, the percentage increase in imports of investment goods in 1958 was only one-third as much as the increase claimed for state investment.

6. Investment and Consumption

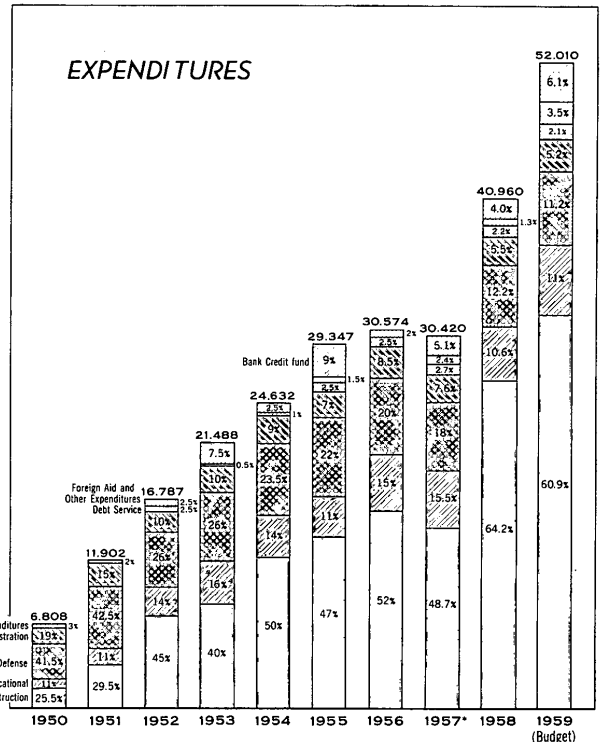
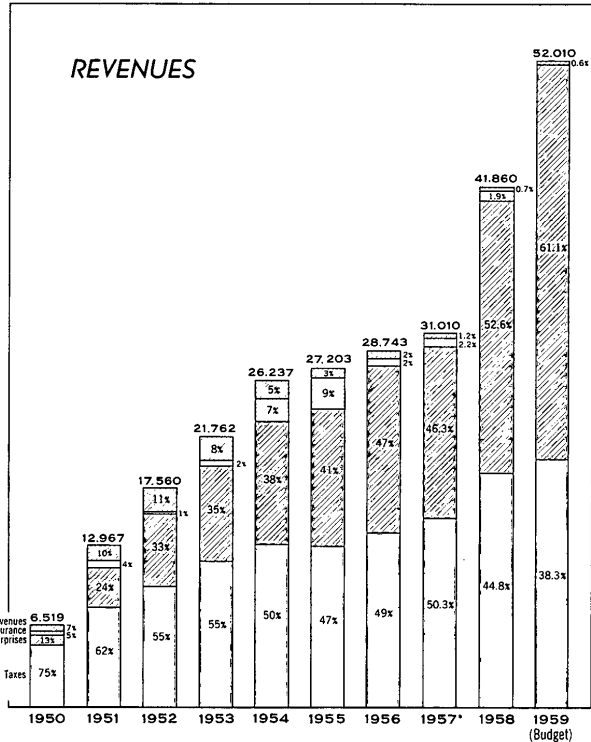
The determination of the Chinese Communist regime to increase domestic investment is reflected in the share of GNP allocated for this purpose, about 28 percent in 1958 compared with 21 percent in 1957. Total domestic investment expanded by about 60 percent, or an absolute increase equivalent to approximately two-thirds of the total increase in GNP. Capital investment financed through the state budget increased by about 70 percent. Agricultural investment from current income is estimated to have been more than double the level in 1957. Inventories probably increased in 1958, but this expansion probably was considerably less than the large increase that occurred in 1957.

As a result of the large expansion in domestic investment, the proportion of GNP allocated to personal consumption declined from 69 percent in 1957 to 63 percent in 1958, with only approximately one-third of the total increase in GNP being channeled to this use. Total consumption in Communist China probably increased by about 8 to 10 percent in 1958, or 6 to 8 percent per capita, with per capita consumption probably exceeding slightly the general level achieved in 1956.

The saving required to support an investment program of this size was accumulated primarily through the budget.* The profits and depreciation funds remitted to the state by enterprises increased by 55 percent, government surplus on current account almost doubled, and domestic bond sales increased by more than 20 percent. Agricultural business saving -- that is, investment financed out of the income of the agricultural sector -- probably more than doubled. Personal savings deposits expanded by more than twice the increase in 1957.

* The budget accounts of Communist China for 1950-59 are shown on the chart, Figure 4, following p. 22.

COMMUNIST CHINA
BUDGET REVENUES AND EXPENDITURES
 1950-59
 (Billions of Current Yuan)



* Final data for total revenues and expenditures for which no breakdown has been given. The percentages listed for each category of revenue and expenditure are related to the preliminary final data of 30.7 billion yuan in total revenues and 50.55 billion yuan in total expenditures.
 ** Beginning in 1958, includes profits and depreciation funds of joint state-private and cooperative enterprises which were previously paid in the form of income taxes.

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Although the evidence is limited, this vast expansion of investment probably has taken place without the building up of the inflationary pressures which accompanied the 1956 advance. Bank deposits in the hands of the principal producing units (communes and state enterprises) increased substantially in 1958. The growth of these deposits may indicate excess funds in the production sector of the economy, a development which may have caused some disequilibrium in manpower and in supplies of raw materials and capital goods. Preliminary data, however, suggest that consumer demand was restricted quite successfully. The communes, which were organized shortly before the time of the fall harvest, provided an effective means of restricting consumption in the rural areas. Agricultural loans increased only slightly and were substantially under the plan for 1958. Rural savings deposits increased considerably more than the expansion of agricultural loans. Total income of urban residents probably increased with the substantial rise in urban employment, but the absence of comment on the trend in average wages and the addition of a large number of low-wage apprentices to the labor force suggest that average wages for all workers and staff probably dropped below the level in 1957. Urban savings deposits also expanded significantly, and the sale of domestic bonds increased in comparison with the level in 1957. Although shortages of some retail commodities were noted, especially in the urban supply of supplementary goods such as vegetables and meat, this situation seems to have been caused primarily by shifts in the pattern of food production and by the disruption of the distribution system rather than by an excess of consumer purchasing power on a national scale.*

7. Allocations of Investment

a. Allocations of Investment Under the State Plan

Capital investment under the state plan in Communist China in 1958 was approximately 70 percent higher than that in 1957 and was equal to about 43 percent of total capital investment during the First Five Year Plan. The pattern of investment allocation to various sectors of the economy in 1958 was somewhat different from that in 1953-57 and illustrates the changes in investment policies implemented by the regime.**

* For estimated production of consumer goods for 1952-59, see Table 11, Appendix D, p. 72, below.

** For estimates of completed capital investment under the state plan for 1953-57, 1958, and the 1959 plan, see Table 12, Appendix D, p. 73, below.

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Industrial investment, 56 percent of total investment under the state plan in the First Five Year Plan, constituted 65 percent of 1958 investment. Investment in the transport sector (railroads, highways, inland waterways, civil aviation, and post and telecommunications), 18.7 percent of total investment in the First Five Year Plan, dropped in importance in 1958 and constituted only 13 percent of total investment. The proportion of investment in agriculture, forestry, water conservancy, and meteorology, which had accounted for 8.2 percent of total investment under the First Five Year Plan, was raised in 1958 to approximately 10 percent of total investment. Although a portion of the increased allocation of investment to industry and agriculture was made at the expense of the transport sector, the greater portion of the increase was made at the expense of the so-called "nonproductive" sectors. Thus the culture, education, and health sector; the "other" category; and the municipal construction sector, which together accounted for approximately 14 percent of total investment in the First Five Year Plan, constituted only 9 percent of total investment in 1958.

Allocations of investment in the 1959 plan give some indication of how well the investment policies of the regime stood up to the impact of the "leap forward" program of 1958. Priority allocation of investment to the industrial sector is to be maintained in 1959, with about the same proportion of total investment going to industry (65 percent) as was allocated in 1958. Investment in the transport sector in 1959 is planned to be increased to 21 percent of total investment (compared with 13 percent in 1958), thus reflecting the necessity for remedying the difficult situation in transportation which resulted from the "leap forward" program. In spite of the regime's earlier statements favoring more state investment in agriculture, investment in agriculture in 1959 is planned to decrease to 7 percent of total investment from the level in 1958 of 10 percent. The level of state support of agriculture through direct investment appears to reflect a continuation of the policy of forcing the countryside to rely primarily on its own efforts in accumulating funds for agricultural investment and is to some extent an indication that the regime is confident that the new communes in the rural areas will serve as an efficient mechanism for obtaining this investment. The continuing policy of holding down non-productive investment is indicated by the fact that the culture, education, and health sector; the "other" category; and the municipal construction sector together are to receive only 6 percent of total investment in 1959 compared with 9 percent of total investment in 1958.

Two recent policies adopted by the regime -- the increased emphasis on construction of medium-scale and small-scale industrial facilities beginning in late 1956 and the latitude provided to local authorities by the decentralization decrees of late 1957 and early 1958 -- appear to have resulted in changes in the proportions of state investment

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funds directly invested by the ministries of the central government and of state investment funds invested by local authorities. About 20 percent of total state investment in the First Five Year Plan was channeled through local authorities, and in 1958 this amount was increased to at least 40 percent. Satisfaction with the results achieved by these policies in 1958 is indicated by the fact that about 43 percent of total state investment in 1959 is planned to be channeled through local authorities.

b. Investment by State Agencies Outside the State Plan

Extrabudgetary investment -- that is, investment that is not included in the state capital construction plan -- is estimated to have totaled 5.7 billion yuan during the First Five Year Plan in Communist China. Total investment expenditures by state and local enterprises, presumably financed outside the budget, were claimed to be 5.3 billion yuan in 1958 compared with the 5.7 billion yuan for investment outside the plan during 1953-57. During the First Five Year Plan, investment outside the plan probably was directed chiefly to nonproductive construction, including military installations. The increase during 1958 in investment outside the plan, which was a result of the somewhat looser central government control over funds in the hands of local authorities in 1958, may well represent not only a substantial increase in nonproductive investment financed outside the budget but also an increase in provincial and county investment in agriculture outside the scope of the 1958 state investment plan. Thus the relative contraction in 1958 in the share of total state investment in agriculture and in the nonproductive category noted above may have been more than made up for through the efforts of local authorities using extrabudgetary funds. No estimate of investment outside the state plan in 1959 is available.

c. Industrial Investment Under the State Plan

During the last years of the First Five Year Plan in Communist China, there was a rapid increase in the number of below-norm industrial construction projects, a trend which continued in 1958. Although the "leap forward" program of 1958 was reflected in a 40-percent increase in the number of above-norm industrial construction projects to be undertaken in 1958, the operation of the "leap forward" program and the decentralization policies of the regime were most strikingly illustrated in a threefold to fourfold increase in the number of below-norm industrial projects undertaken.

In 1957 the planners became concerned with the lagging development of the metallurgical, fuels, power, chemicals, and building materials industries in relation to the development of the manufacturing

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industries. State investment in these industries in 1959 is planned to constitute 70 percent of total industrial investment, whereas such investment in 1957 is estimated to have constituted 60 percent of total industrial investment.

Maintenance of the priority of heavy industry in the allocation of investments is reflected in the small proportion of total industrial investment allocated to light industry. Investment in light industry, which constituted 12 percent of total industrial investment in the period of the First Five Year Plan, dropped in 1958 to about 10 percent. The prospect of increased availability of raw materials for light industry in 1959 as the result of the 1958 harvest appears to be the basis for a plan to increase light industrial investment to 13 percent of total industrial investment in 1959.

B. Costs

1. Strains on the Labor Force

A greatly increased effort was required of the population of Communist China during 1958, and much of this effort was not compensated for by an increase in real income. The large expansion of labor required for the agricultural investment programs and for increases in the effort for cultivating the main crops cut sharply into the leisure activities of the farm population and into household duties not normally included in figures for farm output. Furthermore, farm labor was diverted from farm home industry and from supplementary production, which because of inadequate data cannot be fully included in estimates of agricultural production. Even the harvesting of the crops in some areas was seriously affected by the employment of labor in such activities as native transport of raw materials for the small native blast furnaces. Spoilage and wasted production were admitted by the central authorities, and even though precise measurement is impossible, it is believed that the losses were substantial.

Excessive demands on the labor force were not confined to rural areas. The urban population also felt the force of the "leap forward" program. Students were required to spend substantial amounts of time on various construction programs, leaving less time available for education. The total number of workers and staff members increased by one-third. The addition to this group of employees was 8 million in 1958 alone, as many as were added to total workers and staff members during the entire First Five Year Plan. Most of these workers were added as apprentices with an average annual wage, including allowances, about one-third less than the average annual wage for permanent workers. Because almost half of these additions to the labor force were women, much effort was diverted from household duties and household production.

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Most of the rest of the new workers were said to have come from rural areas. In addition, various "leap forward" campaigns involved workers in overtime and other "bonus" labor efforts for which no wages were paid.

2. Transportation Difficulties

The events of 1958 put severe strains on the transportation system of Communist China. The investment program took a predominant share of available transportation facilities, and the movement and distribution of consumer goods suffered accordingly. Shortages of food were reported in various cities, and the movement of raw materials to industries with low priority was sometimes interrupted. Late in 1958 the Chinese Communists began to pick up some of the freight which previously had been slighted.

The strain put on the transportation system during the "leap forward" effort was well illustrated in reports of extremely hard use and actual abuse of equipment in all sectors of transportation, especially in truck transport. During 1958 the truck park increased from 80,000 to 96,000, or only 20 percent, but the performance forced out of the available equipment in terms of ton-kilometers increased by 40 percent. Thus the utilization of vehicles had to increase substantially, being achieved mainly by multiple driver shifts, use of trailers, and overloading. The damage done by overuse and by unskilled drivers was made more serious by the deterioration of repair and maintenance as garages were diverted to production of trailers and "trial production" of new trucks.

3. Shortages in Food Supplies

Although the evidence indicates an increase of 6 to 8 percent in per capita consumption of all goods and services in Communist China in 1958, this increase apparently was not uniform for all commodities or for all areas of the country. Serious difficulties in the food supply, especially in urban areas, arose in the fall of 1958, primarily because of disruption of the distribution system and shifts in the pattern of food production. Shortages of vegetables, meat, and other supplementary foods occurred, and sweet potatoes were often substituted for rice and wheat flour in the grain ration. Various measures have been taken to ease or eliminate the food shortages, and mainland press commentary in early 1959 on this subject declined somewhat. Scattered reports persist, however, of adulteration and of cuts in rations of all types of foodstuffs.

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4. Shortages of Producer Goods

The competing demands in Communist China for farm production materials and for construction materials at the local level involved considerable inefficiencies in production and distribution. The large demands for producer goods and the call for all-out production under the "leap forward" program led to production of goods of poor quality and to high costs of production. Moreover, so intensive was the drive to obtain large percentage increases in output that not only men but also plant and equipment (including the transportation network) were in many cases badly worn by the pace of production and the failure to use and maintain equipment properly.

Chinese Communist statements indicate that the general condition of productive equipment in the middle of 1959 was poor as the result of continuous night and day operation, excessive wear, and improper operation by new and unskilled workers during the "leap forward" program. The conversion of repair shops and plants manufacturing spare parts to production of complete sets of equipment -- a policy of long standing -- was carried to an extreme in 1958 with the consequence that both repair facilities and stocks of spare parts were in short supply in 1959. In addition, the overriding concern for production which marked the "leap forward" program of 1958 affected the allocation of raw materials, and the remaining manufacturers of spare parts were short-changed in the distribution of available supplies.

III. Communes*

A. Introduction of Communes

The great problems in the organization and control of the Chinese Communist economy which resulted from the rapid but uneven increases in production during the "leap forward" program, as well as from the need to maintain the momentum of the program, led to the introduction in mid-1958 of communes. Each of these monolithic political-social-economic units represents a consolidation of all previous local controls under one tightly knit, semimilitary authority. The communes spread so swiftly that by November 1958 Peking was able to claim that 99 percent of the rural population had been organized into 26,500 communes averaging about 4,750 households each. The momentum of the movement was reduced, however, with the December 1958 announcement of the necessity for an extended period of "tidying up." The resulting period of consolidation continues and has been marked by some modifications of the more extreme aspects of the original program. It is

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believed that the regime will introduce communes in urban areas when those in the countryside have been consolidated.

Communes represent the furthest advance of the Communist revolution in the rural areas of Communist China. In a succession of moves so fast that they seem almost deliberately designed to keep the peasant off balance, the Communists in one decade have redistributed large landholdings among the peasants, encouraged the formation of simple agricultural "mutual aid teams," directed the organization of low-level and high-level agricultural producer cooperatives (APC's), and then in 1958 pushed forward the great campaign to establish communes throughout the whole of rural China.

In some respects the communes are a radical departure from the established forms of social and economic organization. They have a new ideological vigor; they cut across established lines of control; and in their more extreme form they sound the death knell for traditional Chinese family patterns and traditional individualism. The communes, however, have been established largely through the absorption of existing political and economic organizations. A commune, for example, may have absorbed two or three APC's as its production units, its commercial department may be a former supply and marketing department, and the over-all administrative apparatus of the commune may be the former township or county government. In their mobilization of the great manpower resources of China the communes are carrying on a program that already was well begun under the "leap forward" program. Another way in which the communes are identified with the past is in productive equipment and productive techniques. The formation of communes does not automatically provide the tools and fertilizer needed to achieve "leap forward" goals, although communes are designed to supply the organizational framework and the energy for getting them.

B. Brief Description

The communes in Communist China gather, under one administrative unit, agricultural and industrial production; commerce; finance, education and welfare; the militia; and planning and statistics. Only the Party remains as an autonomous and superior seat of power, and in communes in which the local Party secretary is also chairman of the commune even this separation of power does not fully exist.

Each commune covers a small rural area, inhabited in most cases by from 1,000 to 10,000 households. The commune is most often coextensive with the former township, and as of August 1959 little progress had been made toward the regime's goal of merging communes of township size into communes of county size or of establishing countywide federations of communes. The commune is governed by a committee headed by a

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chairman. Below the top level are several departments, each concerned with the supervision of an important phase of the commune's operation. There are, typically, departments for agriculture, industry, commerce, finance, education and welfare, the militia, and planning and statistics. In the extreme case, control over every aspect of an individual's existence -- the assignment of his job, the supply of his food and clothing, the selection of his dwelling, the provision for his old age, and the determination of his service in the militia -- is exercised through this monolithic structure of control.

By August 1959 a few "model" communes were operating according to the ideal pattern of minute supervision of the individual's livelihood and behavior. Conditions in the model communes foreshadowed the gray existence to which the entire rural population of Communist China ultimately would be condemned. Some communes were still merely in the planning stage, just on paper. The majority were in an in-between stage, some of the organizational steps having been taken, with others to follow.

C. Relation Between Communes and the "Leap Forward" Program

The communes were introduced by the Chinese Communist regime largely as an attempt to solve problems created by the "leap forward" program, which had created organizational tangles among APC's, state trading agencies, banking and credit organs, tax units, local state industrial enterprises, and village governments. Not only is the establishment of communes supposed to help straighten out the apparatus of state control, but also it should simplify the task of the Communist Party, which is playing an increasing role in economic planning and administration.

The competing demands for labor that developed during the "leap forward" program brought about the need for a larger and more powerful mechanism of control than was furnished by the APC's. The commune is better able to direct agricultural construction projects, which previously often had covered a wider area than an APC. The commune also is a better instrument for matching the scheduling of labor-intensive projects employing large masses of workers with the seasonal requirements of agricultural production. The "leap forward" program had at first required a disproportionate effort in the cultivation of the main crops or in investment related to the main crops. It was necessary to reduce this effort or to bring all rural activities within the scope of state planning and control. The communes, by establishing public messhalls, nurseries, and other facilities, made more labor available for production and investment. In addition, the communes succeeded in imposing on the peasant longer hours and a more intensive pace of work.

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Finally, the communes simplified control over the distribution of rural income under the "leap forward" program. In a situation in which important economic activities were carried on under corvee-like levies of labor and in which the larger part of consumption consisted of payments in kind, distribution of income could be more easily limited and more easily related to the full range of rural activities if carried on by communes rather than under the previous fragmented system of economic organization.

D. Ideological Aspects

At the start the communes were heralded by the leaders of Communist China as representing an important shortcut to Communism. Much importance was attached to the provision of certain basic necessities such as staple foods and clothing free of charge to commune members, presumably on the basis of "to each according to his need." Soon, however, the extension of this "free supply" system was abandoned in favor of a system of incentive wages, and warnings were issued that idlers would find their supply of food and clothing cut off.

Another ideological aspect of the commune was its supposed creation of a new way of life. At the minimum, the new way of life included even firmer state control over the education of children from infancy up, a greater participation of women in productive activity outside the household and a concurrent increase in public production of former household services, and the elimination of most vestiges of private property and private enterprise. In its most extreme form the new way of life included the establishment of communal dining halls and communal dormitories, the provision of "happy homes" where the aged could look after chickens and perform other useful tasks, and the establishment of an almost frenzied pace of activity involving round-the-clock work on irrigation ditches and small blast furnaces. One ideological aspect of pure Communism that has made little headway under the commune system is the withering away of the state.

Claims by Chinese Communist spokesmen that the communes marked an important advance toward Communism and, by implication, placed the Chinese Communists in the vanguard of the march did not sit well with the leaders of the USSR. Statements by Soviet officials seemed to belittle the communes -- for example, "We tried them once, and they didn't work." Soviet comment also revolved around the necessity for developing industry thoroughly before divorcing the distribution of income from individual productive effort.

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The Chinese Communists reduced the sweeping nature of their claims, admitting that there were formidable economic tasks still to be accomplished and deferring to the position of the USSR as the ideological pace setter of the Bloc. The Chinese Communists also backtracked from some of the extreme measures that were originally associated with the communes, as follows: (1) they soon abandoned their original plan of introducing the free supply of basic consumer goods distributed according to need and stressed instead the need for incentive wages, (2) they reduced the scope of their attacks on the family, and (3) they reduced the emphasis on the military aspects of the communes.

E. General Economic Aspects

A prime tenet of Communist economic policy is to limit carefully the resources going to consumption in order that capital plant may be built up and the armed forces strengthened. The margin between present consumption and privation or even starvation is still very thin in Communist China. The communes, each of which potentially represents a central unified point of economic planning and accounting, are in the long run an excellent device to insure that consumption is increased just enough to prevent serious discontent and to reward extra economic effort but not enough to endanger investment or the military program.

A second aspect of the commune system is the control that is gained over local production. The commune officials are local representatives of the central structure of control. Ideally, they combine a devotion to centrally imposed goals with flexibility and a knowledge of local conditions. In the past, Peking has exercised only a shadowy control over agricultural planning and production and over the handicraft sector of the economy. A great deal of production of subsidiary foods, clothing, and utensils was once carried on, even as late as 1957, by rural households in the off-season. The organization of gangs of men to work on irrigation and other projects in the slack season, the mobilization of women for work outside the home, and the strict control over supplies of raw materials have seriously affected handicraft and other types of "individualistic" production. Elements of private enterprise and "localism" now have less chance than ever of hiding in the nooks and crannies of the system.

A third aspect of the commune system is the way in which the communes serve the economic purpose of breaking up tradition-bound methods of agriculture and petty commerce and industry. Some jobs, especially the building of large irrigation works and the working of crops with modern agricultural equipment, require an economic effort that is beyond the resources of the APC. Moreover, it should be noted

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that the commune has under its direction not just productive resources but all resources within its geographical area, including control over the commercial, financial, educational, and local militia organizations.

A fourth aspect of the commune system -- the development of which must wait for the future -- is the question of whether or not the commune is inherently a self-sufficient economic unit. A related question is whether or not the policies of the regime call for an all-out effort to achieve economic self-sufficiency in the communes. The monolithic structure of the commune organization itself -- its tightly knit control over all facets of human activity and human existence within a given geographical area -- is a giant step toward self-sufficiency. The fact that for generations the rural areas of China have raised their own food, sewn their own clothes, and fashioned their own tools and utensils is another important basis for self-sufficiency. And as for present-day motives for economic self-sufficiency, the specter of atomic warfare makes attractive the idea of a society with a central nervous system composed of sections of ganglia, each section capable of an independent existence when cut off from the central brain. This point was raised by the regime itself during the Taiwan Strait crisis of 1958. The major factor in the economic situation of Communist China that runs counter to the idea of self-sufficiency in the communes is the general necessity for each commune to specialize in a type of production for "export" to other parts of the economy for use in the industrialization program -- for example, a "cotton commune" might have as its reason for being its ability to supply raw cotton for use in the mills of Shanghai. Perhaps a compromise on the issue of self-sufficiency will come about, resulting in a policy that each commune, although expected to take care of the daily needs of its people, will depend on outside sources for at least the complex types of capital equipment and industrial products and will in turn send out ever-increasing supplies of foodstuffs and raw materials for the support of the industrialization program. Evidence of such a compromise is the present policy of becoming self-sufficient in production of vegetables but dropping production of industrial products (such as native steel) in cases where local raw materials and technical skills are wanting.

A fifth aspect of the commune system in Communist China which is of long-run importance is the opportunity potentially afforded by the communes for control over the rate of growth of population. The communes constitute a highly efficient mechanism for circulation of information on birth control. Although the birth control program was strongly emphasized 2 years ago, it is now proceeding quietly, completely overshadowed by the "leap forward" campaign for production. Because the Party line is currently one of regarding the huge population of mainland China as an economic asset, there are no immediate prospects for a reinvigoration of the birth control program. Even if the regime

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does not wish to take advantage of the control over the growth of population afforded by the commune, the recasting of family life under the commune system -- the taking of women out of the home, the mobilizing of men in work gangs for distant projects, the communal raising of children, the separation of the aged from the family, the establishment of communal eating facilities, and the receipt of income by individuals rather than by heads of families -- will have its own nonofficial influence on the rate of growth of population.

F. Initial Problems

One problem faced by the communes in Communist China is how to restore or replace the output of small-scale industry and commerce that has been disrupted or neglected during the "leap forward" program. The mobilization of large gangs of workers for concentrated work on big irrigation projects or on main crops has adversely affected production of subsidiary foodstuffs such as vegetables and meat, and the removal of women from the household and their installation in full-time jobs has meant a loss of their traditional domestic production and the necessity for establishing communal laundries, tailoring shops, and other service facilities. The commune indeed has control over the entire range of economic activity in the local area, but putting this control into effect requires time and skill. Meanwhile, shortages of some subsidiary foodstuffs and deficiencies in locally provided services continue.

Part of the economic difficulty in establishing new systems of production under the communes concerns the effect on craftsmanship of the decline of individual control over production and of the decline in individualism in general. Some reports on the communes suggest that a new all-purpose worker is being developed, one who works on crops for a season and then is transferred to a flood-control or irrigation project for a few months, with his evenings being usefully employed perhaps in stoking small blast furnaces. This new type of worker is a wage earner -- neither a peasant who keeps the remainder of his crop after the landlord and tax-collector have taken their shares nor a skilled construction or industrial worker nor a craftsman. The opinions expressed in this paragraph are largely conjectural, but the point is that the commune system would seem to face a continuing difficulty in maintaining quality in those instances in which individual craftsmanship and individual control over production have heretofore been important. Over the long run, division of labor and acquisition of technical skills in communes probably will be encouraged, but that part of craftsmanship which depends on the craftsman's identifying himself with his own product will be hard to restore.

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The communes have a problem in establishing a system of distribution of income among the people of the commune. One aspect of the problem apparently has been greatly simplified, for the commune itself will ultimately be the single point at which taxes are accounted for and collected by the central government. Net income received by the central government will depend on the extent to which real goods flow out of the commune and are not compensated for by a flow back in.* In the case of poor communes, the central government can for a time arrange to have more goods flow in than flow out, and such a situation might be behind the announcement in April 1959 at the National Peoples Congress that 1 billion yuan were being used for the support of economic construction in poor communes. It should be noted that these same communes might well be paying taxes of that amount or more and that there is, therefore, no way of knowing how much of the 1 billion yuan, if any, is net support.

Once the central government's share is taken, the remaining income of the commune goes for investment and consumption. Ordinarily, investment and consumption are thought of as competing alternatives, but one feature of economic activity in 1958 and early 1959 was that investment was increased by increasing the hours of work and the pace of work. The member of the commune did not sacrifice his meager consumption in order to provide a higher level of investment; instead, he sacrificed rest and leisure.

Investment is usually said to have priority over consumption, and indeed one of the purposes of the communes is to regulate the flow of foodstuffs and other goods in such a way that individuals or local groups cannot withhold too large a share of goods for their own use. "Too large" by Communist standards means larger than necessary to maintain a reasonably contented and reasonably well-nourished working force. Distribution of income will be carried out on a pragmatic basis under the communes but will remain a problem for the indefinite future because the economy of Communist China is not yet strong enough to provide appreciably higher levels of consumption and still carry out the industrialization and military programs.

G. Future Course

The communes in Communist China remain in an experimental stage. The original 4-month "tidying up" campaign launched in

* Total inflows and outflows of all communes taken together do not balance off to zero, because (1) the communes are in rural areas only, and it is the function of the rural areas to provide a "surplus" to support the industrialization program and (2) the central government's use of resources to maintain a large military establishment is supported by net outflows from the communes.

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December 1958 was still going on in August 1959, and modifications and consolidation of the communes are expected to continue during the rest of 1959. Many of the extreme practices of the communes have been stopped, and a number of practices of the old agricultural producer cooperatives have been reintroduced.

The degree of popular opposition to the formation and consolidation of communes varies from area to area. Both social and economic factors, however, are behind the regime's decision to discard a number of the extreme practices. In the first half of 1959 the number of inroads on the family system was reduced, and official sanction for the withdrawal of commune members from the messhalls was granted. Concern over the loss of incentives which the free supply system has entailed has led to warnings to commune leaders against providing too large a proportion of the members' income in the form of free supply, and the issuance of messhall tickets has been increasingly tied in with the type and quantity of work performed. The general increase in emphasis on incentives to production is reflected in such measures as the return of some subsidiary production (including the raising of hogs) to the individual.

The diversity of agricultural areas in Communist China will preclude the standardization of the forms and activities of the communes for some time to come. The major economic problem in one area may be lack of fertilizer for the fields; in another, poor transportation. Some communes are rich in resources, some poor. The final form taken by communes probably will not be standardized but will reflect varying local conditions as well as the varying local experiences of the first years of operations.

The extension of the system of communes to urban areas appears to be an inevitable development. As in the case of the rural communes, however, the regime can and will adopt various sets of rules for different places and still call the resulting organizations "communes." One important economic difference between rural and urban communes is that urban communes would be in a vastly different position with regard to self-sufficiency in food, although some attempt might be made to include portions of the neighboring countryside in urban communes. A second major economic difference between urban and rural communes is the difficulty of enforcing on urban people the same level of consumption and the same kind of consumption pattern that exist in rural communes. The leaders of Communist China are not under the same economic pressure to form communes in the urban areas as they have been in the rural areas, although they appear ideologically committed to introducing the system eventually.

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IV. Economic Prospects for 1959 and 1960-62

Economic developments in Communist China in 1958 and 1959 indicate that the rate of growth during the period of the Second Five Year Plan (1958-62) will be substantially higher than during the period of the First Five Year Plan (1953-57). It was originally estimated that the annual average rate of growth during 1958-62 would be between 7 and 8 percent, approximately the same as that achieved during 1953-57, with output in 1962 about 40 to 45 percent higher than in 1957. Previous estimates, however, were based on a continuation of the framework of economic policies that had been established during the period of the First Five Year Plan. It was this framework of policies that was embodied in the original proposals for the Second Five Year Plan presented in late 1956. In these proposals, investment as a percentage of GNP was specifically aimed at a level close to the 1957 percentage, and long-term planning was influenced by the consolidation and retrenchment that took place in 1957. These proposals, therefore, called for a rate of growth that would minimize the strains and costs of the industrialization program, and, as a result, the Second Five Year Plan proposals were presented in terms of minimum economic objectives rather than maximum targets.

The picture changed radically when the regime decided in 1958 to make maximum economic growth the overriding principle of the planning and operation of the economy. The leaders decided to increase investment and to emphasize types of construction that would employ to the fullest possible extent the vast population of Communist China, and the timetable for investment projects was shortened. The social and other costs inherent in the new drive for large increases in output were to be largely disregarded. The prospects for increases in output during 1959-62 (now that the remarkably good results for 1958 are in) indicate that GNP in 1962 will be 65 to 85 percent higher than in 1957. The average annual rate of increase during 1957-62 will be 10 to 13 percent, about one-half to two-thirds higher than during the First Five Year Plan. The reasons for this substantial upward revision in the estimates are given below.

A. Factors Favoring Continuation of the "Leap Forward" Program

1. Carryover Effects of Increases in Agricultural Production in 1958

In general, increases in agricultural production, particularly of industrial crops, affect production of light industry and the volume of trade during the following year. Therefore, in view of the 56-percent increase achieved in Communist China during 1958 in production of cotton and the large increases in other raw materials for

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light industry, production of light industry in 1959 probably will show a larger percentage increase in 1959 than in 1958. This larger increase will help redress lags in consumption that occurred in 1958. The relatively large increase in production of basic food crops in 1958 will permit a continued emphasis on increasing production of industrial crops and will increase the supplies of fodder for building up the numbers of livestock and production of meat.

The floods in the early part of 1959 had a negligible effect on total national production of basic food crops but are typical of difficulties being encountered in agriculture in 1959. With a bumper harvest in 1958, agricultural production of basic food crops is not likely to increase in 1959 and may very well decline, and large increases in production of industrial crops are not expected for 1959. Therefore, this carryover benefit for light industry in 1959 cannot be expected to hold for increases in production in 1960. This factor indicates a definite slackening in the rate of growth during 1960-62 compared with 1958 and 1959.

2. Greater Efficiency of Unskilled Labor Brought into Production in 1958

The additions to the labor force in 1958 constituted a large proportion of the total unused labor potential of Communist China. In spite of the commune movement and the potential for increasing the participation of women in the urban labor force, another such increase is not likely to occur in 1959. It is likely, however, that with training and better allocation of the large number of unskilled workers added in 1958, greater efficiencies in production will counterbalance the smaller increase in the labor force that is likely to take place in 1959. These efficiencies probably will be secured through greater experience and training on the part of these new workers and through eliminating some of the many wasteful diversions of labor and the high-cost exploitation of raw materials that occurred in 1958. Indications of this trend are shown in policy statements in the Communist press that (a) local projects must be brought under state plans to insure that adequate materials and manpower are available, (b) 80 percent of the commune labor force must be concentrated on agricultural production and not diverted to industrial projects or large-scale irrigation projects except when seasonal unemployment permits, and (c) recruiting of rural manpower by industries in the urban areas must be curtailed. Although these policies should improve the effectiveness of the labor force in 1959, they will have less effect during 1960-62. In the long run, increased output per worker will have to depend on increasing capital equipment and on improvements in the technical level of production.

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3. New Level of Investment

The all-out effort to increase investment in all sectors of the economy of Communist China is estimated to have raised gross domestic investment as a proportion of total output from about 21 percent in 1957 to a level of roughly 28 percent in 1958. By 1959, investment should constitute at least 30 percent of total output. As the strains and costs of the present policies take effect, investment as a percentage of total output may level off in 1960-62, but the allocation of a much higher percentage of output for investment will favor an increase in the rate of growth in the years following 1959 compared with the period 1953-57.

B. Factors Not Favoring Continuation of the "Leap Forward" Program

1. Psychological and Social Strains of the Mobilization Program

The people of Communist China have been subjected to extraordinary demands on their energy and morale and to drastic changes in their way of life. It is an open question as to how long such extraordinary demands can continue to be effective. It is also uncertain how strong the reaction to these extraordinary demands will be when and if it occurs. In addition, the regime has resorted to an exaggerated view of the increases achieved and has held forth the promise of innumerable effects that have not been realized. The claims of doubling production of food when actual consumption of food has increased by a relatively small amount, the exaggerated claims for increases in production as the result of the agricultural investment undertaken, and the utopian aura that pervades much of the propaganda for the "leap forward" program represent serious problems for the regime. In the future, promises of rewards for increased productive effort may not be so effective. The regime still has the problem of establishing a permanent incentive system which will maintain the momentum of the "leap forward" program.

The strains of present mobilization programs and the effects of unrealistic claims made for agriculture and handicrafts have already resulted in a marked shift in emphasis in the speeches and public statements in the Communist press. The regime is committed to another "leap forward" program in 1959, but emphasis for 1959 as revealed by speakers at the Second National Peoples Congress in April 1959 was on further centralization and consolidation of control over economic activities and on the acceptance of a more sober view of the difficulties to be encountered in meeting production goals.

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As these trends continue in 1959, the Communist planners probably will continue to concentrate on a better allocation of investment goods and on greater productivity. By 1960, if not sooner, definite changes in planning and propaganda are likely in order to rationalize a slackening of pace and in order to shift the emphasis from mobilization of labor to the efficient use of labor. The "leap forward" program probably will be proclaimed a success but will be replaced by a different framework of organization and control. The communes' methods of operation may be revised in the light of experience and the shift in goals, but they probably still will be called communes and still will be publicized as the wave of the future.

2. Imbalances in Production and Difficulties in Planning

The "leap forward" program of 1958, which was concentrated on increasing physical production with almost complete disregard for certain social and economic costs, resulted in serious imbalances in the economy of Communist China. Since December 1958 the primacy of the centrally controlled national plan has been reasserted under the slogan of "the whole country ... a coordinated chess game" in an attempt to remedy these problems. Some of the imbalances in the economy were caused or intensified by the enthusiasm with which authorities on local levels of government put into effect the increased powers granted to local governments in 1958. Provincial party officials are now exhorted to consider the whole country as a "chessboard," with their respective provinces as "chessmen." The exact degree to which it has been necessary to slacken the pace of economic expansion in order to get the chess pieces coordinated is hard to estimate, and the sparse midyear economic report for 1959 gives few clues. In August 1959 the regime instituted a new program of exhortation, aimed at eliminating the "hardship-evading and laxity sentiments" of rightists who had overdone the slackening of pace. Nevertheless, the long-term task of the Chinese Communist economic planners, hindered as they are by inadequate data from important sectors of the economy and by strong ideological pressures for full speed ahead, is to plan for the redressing of these imbalances in the remaining years of the Second Five Year Plan.

The most important of these imbalances are as follows:

(a) supplies of raw materials -- in particular, construction materials -- sometimes were inadequate to meet the greatly increased tempo of agriculture and industry; (b) the output of certain kinds of raw materials was often of such poor quality as to be useless at further stages of production; (c) increases in production of main food crops were achieved partly at the expense of production of "subsidiary" foods such as meats and vegetables; (d) storage and transport facilities generally were inadequate to handle the increased production, so that various areas suffered from shortages of food and from delays in the movement of raw

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materials for light industry; (e) in some industries, such as the steel industry, processing facilities were inadequate to handle the increased flow of raw materials; and (f) in some instances where women were drafted out of the home for work in field or factory the provision of communal facilities to replace former household production was inadequate.

The deterioration in the quality of Chinese Communist economic statistics in 1958,* added to the difficulties endemic to the statistical systems of all nations of the Sino-Soviet Bloc, means that the planners lack accurate information on past performance, especially in the agriculture and handicraft sectors. The planners have no accurate idea of what economic costs were entailed in achieving the substantial gain in output. They probably cannot determine, for example, the extent to which production of meat and vegetables in 1958 suffered from the concentration on main food crops. In addition, the whole Second Five Year Plan, as put forth in late 1956, is now hopelessly out of date because of the "leap forward" program, and a new and difficult reassessment and rebalancing of inputs and outputs is called for. If production of crude steel is to be more than quadrupled during the Second Five Year Plan, a tremendous effort will be required to plan for and actually to furnish the raw materials, labor, transportation, and management energy not merely in the iron and steel industry but in a whole complex of industries.

C. Probable Trends

The 1959 plans adopted at the Second National Peoples Congress in Communist China in April 1959 call for approximately the same absolute increase in total output as that achieved in 1958. Because agriculture is not likely to have an appreciably better year in 1959 than in 1958 and because industry is expected to benefit from the continuation of the momentum of the "leap forward" program, it is likely that the increase in GNP in 1959 will be about 12 to 15 percent compared with the increase in 1958 of approximately 20 percent. The operation of the Chinese Communist economy during the first 5 months of 1959 gives no evidence that there is likely to be a radical departure from the range of 12 to 15 percent.

During 1960-62 the rate of growth will depend largely on the proportion of GNP that the regime is able to allocate to investment and on the usefulness of the new capital assets and the efficiency with which they are managed and operated. In view of the costs and strains of the "leap forward" program, the period 1960-62 is likely to be a period of consolidation of the gains achieved in 1958 and

* See Appendix A.

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1959. It is estimated, therefore, that investment as a percentage of total output is not likely to increase greatly above the 30 percent estimated for 1959. In the period of the First Five Year Plan, investment averaged about 17 percent of GNP, whereas GNP increased by 7 to 8 percent a year. About one-third of the increase in total production in the period of the First Five Year Plan, however, can be attributed to recovery from the disruptions of the economy caused by war and to greater utilization of capacity -- factors that will not affect the trends in production during 1958-62. Therefore, the maintenance of an average annual rate of 7 to 8 percent a year during 1960-62 probably would require a level of investment that was about 22 to 23 percent of GNP, approximately the average level that was embodied in the original proposals for the Second Five Year Plan. If the 1960-62 level of investment is about 30 percent of GNP, total production could be expected to increase at an average rate that is one-third higher than that during the period of the First Five Year Plan. Because examples of wasteful investment showed up during the "leap forward" of 1958 -- when the psychological atmosphere was one of raising physical output with much less concern for costs and the effective use of the final product -- the problems of the proper planning, the proper timing, and the proper management of the new investment become important to the question of how much useful output the new investment will add. The average annual increase in GNP for 1960-62 on balance probably will fall in the range of 7 to 10 percent a year. The estimate of an increase of 65 to 85 percent in GNP for the period of the Second Five Year Plan is based on estimated increases of about 20 percent in 1958, 12 to 15 percent in 1959, and 7 to 10 percent in each year of 1960-62.

The above estimate assumes that political and social reactions to the commune program and to other economic policies will lead only to revisions and adjustments in the Communist economic program but will not force any drastic changes in policies. The lower end of the range represents the result of a combination of adverse factors, whereas the higher end would be the maximum rate of growth likely to occur under a combination of favorable circumstances. Even if the regime has to face a strong reaction to the commune program or a succession of bad crop years and, as a result, has to reverse its present policies in favor of a smaller planned rate of economic growth, the actual average rate of increase in GNP for 1960-62 is not likely to fall below the 7 to 8 percent achieved in the period of the First Five Year Plan.

1. Prospects for Agriculture

The prospects for agriculture in Communist China for 1959-62 are more for a consolidation of the higher level achieved in 1958 (a year of bumper harvests) than for an achievement of annual

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increases similar to the increase in 1958. Press reports on the extent of flooding in Communist China in 1959 probably exaggerate the actual effects of flooding on agricultural production in 1959. In August 1959, however, both flood and drought were continuing to affect agricultural production adversely, and it remains to be seen what the ultimate effect on production will be. Several possibilities are suggested as the reason for the regime headlining the occurrence of natural calamities. Reports of this type serve to lay the propaganda groundwork for the following: (a) an announcement of a full retreat from high-pressure economic policies of the "leap forward" variety, (b) a drive for still further mobilization of effort and continued sacrifices on the part of the population, or (c) self-congratulatory expositions on the merits of a system which has met and successfully overcome these disasters so effectively. The situation in China as of August 1959 suggests that a drive for renewed mobilization of the population for the attainment of 1959 plan goals is in the offing.

By 1962, even with the dramatic percentage increase in production of chemical fertilizer, the total supply will still be far short of meeting the needs of Chinese Communist agriculture. The increase in production of chemical fertilizer from large-scale industry expected for 1962 is estimated to be sufficient to increase the production of basic food crops by 4 percent in comparison with the level in 1958, not a large increase in terms of the ambitions of the Communist planners. Although the massive irrigation effort in 1958 undoubtedly was poorly carried out, it is probable that an effective expansion in the irrigated area to 60 percent of the cultivated area will take place during the remaining years of the Second Five Year Plan. The extension of irrigation would act to minimize losses in poor crop years -- a development that would appreciably raise the average output of the agricultural sector -- and would permit the shift to higher yielding crops such as rice. It also will help to some extent in raising yields of other crops. It is already clear that the much-publicized campaigns for deep plowing and close planting and other labor-intensive methods of cultivation are not justifying the hopes of the Communist planners to secure large increases in average yields while reducing the sown acreage. A shift in policy has already taken place in 1959 toward increasing the sown acreage, and the consolidation and improvement of the irrigation systems undertaken in 1958 should make possible significant increases in multiple cropping by 1962.

Five percentage points of the 15-to-20-percent increase in production of basic food crops in 1958 in comparison with the level in 1957 is estimated to have been the result of unusually favorable weather conditions. Long-term projections of basic food

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crop production through 1962, therefore, must be based on an increase in 1958 of 10 to 15 percent in comparison with the level in 1957. Improvements in the cultivation of crops and in the development of superior seeds can be expected to raise yields of basic food crops by about 4 percent during 1959-62. Increased availability of chemical fertilizer from organized industry is expected to raise production by 4 percent in the same period. Consolidation of the huge irrigation program undertaken in 1958 should make possible an increase in output of about 8 percent. Thus the over-all increase in basic food crops in 1962 at the end of the Second Five Year Plan is expected to be 25 to 30 percent in comparison with the level in 1957. Because the general trends in agricultural production are likely to correspond with these rough projections for production of basic food crops, the average annual rate of increase in agricultural production from 1957 to 1962 is estimated to be about 5 percent, twice as great as that estimated for the period of the First Five Year Plan.

2. Prospects for Industry

The effects of the "leap forward" program in Communist China in 1958 and 1959 entail a sharp upward revision in the original estimates made for output of heavy industry in 1962. Output of light industry will not be affected nearly so much by the "leap forward" program and probably will meet the original 1962 targets; in only a few cases (machine-made paper being the most important) can a substantial exceeding of targets for light industry be anticipated. Average growth for industry as a whole during the Second Five Year Plan is now estimated to be about one-half above the average annual rate of 16 percent achieved during the First Five Year Plan. Even if unforeseen problems force cutbacks in the industrialization program in 1960-62, the average rate for the Second Five Year Plan probably will still be one-third higher than the rapid rate of the First Five Year Plan.

As far as can be ascertained, the Chinese Communist regime has issued no new carefully balanced Second Five Year Plan to replace the original Second Five Year Plan, the goals of which were made obsolete by the success of the "leap forward" program. Indeed, there is no evidence that such a plan is now being drawn up, although it would seem to be a matter of very high priority. The plan for the single year 1959, however, appears to have been the result of a fairly careful reconciliation of ends and means. The draft of the 1959 plan calls for consolidating and tidying up the gains of 1958. It is true that goals for production are high: steel (including native steel), 18 million tons; coal, 380 million tons; electricity, 40 billion kilowatt-hours; and cement, 12.5 million tons, but at least some consideration is given to the availability of transportation and to the supply of raw materials.

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One explanation for the failure of the regime to publish a full-dress version of what may now be expected in 1962 is that proper planning for the last 3 years of the Second Five Year Plan must wait for the organization and standardization of the planning and statistical departments of the newly formed communes. What information there is on the goals for expansion of industry is optimistic and deals with the stepping up of the program of construction. New plants have been added to the list of construction projects; the amount of expansion planned for old plants has been increased; and the time schedule for completing the construction and expansion of new plants has been greatly shortened, in some cases by 2 years or more.

The absence of a new formal plan for 1962 in Communist China and the uncertainties about the final organizational form and the economic effect of the communes make the estimating of rates of growth for the next 3 years even more hazardous than usual. In general, it appears that production of important industrial commodities will by 1962 be at levels which would have seemed inconceivable to Western observers before the remarkable successes of 1958. In the all-important iron and steel industry, the original goal of the Second Five Year Plan was for production of crude steel of 10.5 million to 12.0 million tons in 1962, a doubling of the 5.35 million tons produced in 1957, the final year of the First Five Year Plan. Under the "leap forward" program of 1958, production reached 11.1 million tons, of which about 7.5 million tons were commercially acceptable. The 1959 plan sets a goal of 18 million tons, three-fourths of which probably will be commercially acceptable. The schedules for construction of plants and delivery of equipment have been greatly accelerated, and if these accelerated schedules can be fulfilled, it is estimated that production of crude steel in 1962 can be expanded to 25 million tons of steel that is usable by Chinese standards, almost 5 times the 5.35 million tons produced in 1957. About one-half of the 25 million tons would be considered to be of good quality by Western standards, the remaining production being of lesser degrees of quality, with the lowest still better than the crude steel produced by native furnaces in 1958.

The small native furnaces themselves, which created such a sensation in 1958, have been for the most part abandoned because of their poor product and high costs of production. This adjustment should be regarded not so much as evidence of economic weakness but as the correction of one of the grosser wastes that arose during the more frenetic moments of the "leap forward" program. Where locational factors are favorable, a few of the native furnaces have been retained to serve as nuclei for small plants.

The greatest difficulty faced in the iron and steel industry is the provision of sufficient finishing capacity to complement the

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rapidly increasing capacity in crude steel. In 1958, somewhere between 1 million and 2 million tons of crude steel apparently could not be processed and had to be stockpiled. Communist China is dependent on the USSR and the European Satellites for most of its modern rolling mill equipment, and although the USSR is short of such equipment, it apparently has agreed to speed up deliveries to China. In addition, the machine building industry of China is making a frantic effort to produce rolling mills of simpler design. Western nations -- for example, the UK and West Germany -- would be happy to sell rolling mill equipment to China, but the latter's ability to pay is much in doubt.

It must be realized that the regime gives special emphasis to iron and steel and that not all branches of industry or all sectors of the economy can expand simultaneously at this dizzying pace. The following three major difficulties must be considered in estimating rates of growth for industry as a whole: (a) the rail transport system, which accounts for more than 80 percent of the ton-kilometer performance in the modern sector of the economy, was badly overworked in 1958 and early 1959, and the burden on it can be expected to increase in rough proportion to the increase in industrial production; (b) the labor force, although huge, is not inexhaustible, and the directive in early 1959 to put 80 percent of the manpower in communes into direct agricultural production means that the needs of other sectors are not going to be met by a simple levy on agriculture (in addition, the rapid growth in the output by industry and the growing importance of securing a technically more complex product mix in industry mean that thousands of skilled workers and foremen must be added to the labor force each year); and (c) the extremely rapid increases in production, the stresses and strains resulting from the "leap forward" program, and the tremendous problems presented by the revolutionary new communes put an unparalleled burden on the managerial structure of Communist China.

This acceleration in industry means that Communist China is making considerable progress in its attempts to overtake Japan and the UK in industrial development, thus further increasing the economic power of China relative to that of other Asian countries and also the ability of China to support a military establishment with modern weapons. China is not expected by 1962, however, to develop a capability for producing nuclear weapons. By 1962 the percentage of GNP at factor prices contributed by industry probably will be on the order of 30 percent, not far below the present level of industrial output as a percentage of GNP in Japan but well below this level in most industrial countries. The increases likely in agriculture and light industry during the Second Five Year Plan will bring about a level of consumption perhaps 25 percent higher per capita than in 1957, but the level will still be extremely low compared with that in Western countries, in the USSR, and in Japan.

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3. Prospects for Other Sectors

The development of modern transportation facilities in Communist China will continue to expand in proportion to the demands placed on them by industry and construction. The predominant share of freight movement in terms of ton-kilometers will be carried by the railroads, with a comparatively more rapid increase in short-haul traffic by highway transport. Coastal and inland water transport probably will continue to expand but not quite at the same rate as other types of modern transport during 1959-62.

The program for building up the supply of skilled manpower through educational and technical training programs is receiving much emphasis from the regime along with emphasis on political indoctrination. Housing probably will continue to have a low priority for the regime, and investment in residential construction probably will be limited to the minimum that is essential for the economic program as a whole.

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APPENDIX A

CHANGES IN THE RELIABILITY
OF CHINESE COMMUNIST STATISTICS IN 1958

During the First Five Year Plan (1953-57) the statistical data coming out of Communist China suffered from a number of general ills that characterize the statistical data from all members of the Sino-Soviet Bloc: (1) a large part of the data,

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[redacted] was withheld or was published in only the most general form; (2) "unfavorable events," such as the failure to reach the plan goal for a particular commodity, often are simply omitted from production reports; (3) definitions of the units employed in the data and of the coverage of the data often are not supplied; (4) increases in "state" production often merely reflect an increase in the number of socialized enterprises rather than real economic gains; (5) as the statistical system puts down roots, the efficiency of its coverage grows, so that increases in a series of data sometimes represent a more thorough counting of what was done rather than an increase in what was done; and (6) in situations in which an economic sector or activity is only loosely controlled by the central authorities, its data are likely to prove less reliable than data from sectors under tight central control.

In the case of Communist China, production of various commodities under the First Five Year Plan was compared in statistical reports with production in 1952, a year in which the coverage of the statistical system was still gravely inadequate. By 1954 the statistical system was operating at a considerably higher level of competence and sophistication, and an appreciably greater proportion of economic activity came within the purview of the system. Therefore, data covering the years 1954-57 are relatively good. A weakness peculiar to the Chinese statistical system has been the inadequate number of trained and experienced statistical workers. Hundreds of thousands of statistical workers are needed to cover the vast area of China, and the serious shortage of such workers has meant from the beginning a very sparse and undependable coverage of economic activity, especially in rural areas.

There was a pronounced deterioration in the reliability of Chinese Communist statistics in 1958, especially statistics covering the agricultural and handicraft sectors of the economy. This deterioration -- attributable mainly to the subordination of the integrity of the statistical system to the political requirements of the "leap forward"

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program -- has resulted in fantastic claims for increases in production of food crops and in probable overstatement of agricultural investment by the farm population and of production and investment in local small-scale industry. There is little evidence, however, of any significant change in the reliability of statistics for production and investment of relatively large-scale enterprises under the central government ministries or of statistics for retail and wholesale trade and for procurement of agricultural commodities.

The members of statistical reporting units at the local level suffered a loss of independence from political pressures in 1958. They were specifically directed to orient their activities to the demands and policies of local Party and government officials, were required to spend some of their time in actual production, were expected to shape their statistical reporting to requirements for statistics by local planners, and were expected to produce their reports in the shortest possible time. Ostensibly these changes were aimed at making the statistical system more useful for planning at the local level. In practice they served to weaken the technical and administrative control of the central statistical authorities and to reduce greatly the reliability of statistical reports from local units.

These changes in the status and duties of statistical workers in the field were due to the over-all shift in economic policies which had as its purpose making "politics lead economics." Emphasis on the system of managing economic activity on the basis of central planning and of carrying out plans through the hierarchy of economic ministries was replaced by a "mobilization psychology." Under the new psychology, men and materials were hurriedly mobilized for mass projects, with much less attention being given to the statistical system as a way of controlling and balancing production. Under the planning framework of the First Five Year Plan (1953-57), economic statistics served primarily as a means of supervising fulfillment of targets, and to a large extent this continued to be the case in 1958 for the economic activities under the supervision of the ministries at the level of the central government. The statistical reporting system, especially since 1954, has made notable gains in technical competence and reliability of reporting and has been increasingly successful in checking the general reasonableness of local agricultural statistics.

In the "leap forward" campaign of 1958, aimed at maximum increases in output of agriculture and local handicraft, statistical reporting units at the local level had a new propaganda function. Statistical reports increasingly served as propaganda material -- for example, for the support of emulation drives, to dramatize increases achieved in crop yields, and to publicize successes in increasing handicraft production through "native" methods.

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In a certain sense the regime became the victim of its own statistics. Local leaders were encouraged to set high goals in order to encourage "production enthusiasm." High crop yields secured on experimental plots were apparently adopted as standard goals, and reports from statistical units at the local level apparently failed subsequently to show any differences between these goals and actual production, presumably because local leaders were afraid of criticism. In other instances, reports of production achievements apparently were made in anticipation of actual results. The system seemed to encourage a sort of statistical euphoria, and under the circumstances it is not strange that the central statistical authorities lost what ability they had previously acquired to check the validity of figures coming in from the field.

The new emphasis on rapid expansion of agricultural production and on increasing handicraft production affected just those economic sectors where reliable statistics are intrinsically most difficult to obtain -- where there are tremendous numbers of small reporting units that have no established system for keeping records on production or income. The extension of state control into these areas carried with it a potential for measuring production that previously had been included in statistical reporting only with difficulty, but the "leap forward" program more than counterbalanced this potential for improving statistical reporting in these sectors, not only through "politics leads economics" policy but also through a drastic change in the system of production and through the introduction of accounting procedures that had no counterpart in previous economic reporting. Therefore, even where new accounting procedures were introduced in 1958 they tended to measure not only increases in production but also production not included in previous statistics and production which was achieved at the expense of a decline in farm home industry or other household activities not previously measured. In addition, there has been a chronic general lack of sufficient statistical workers to cover rural areas in detail, and there also have been delays in setting up the planning and statistical departments of communes.

As a result of the fantastic claims for production of food in 1958, in its official propaganda the regime has held forth prospects of considerable gains in consumption of food by the peasants when no such gains were in fact realized and when actual shortages of food were experienced in some areas. These exaggerations make it more difficult to keep tight control over the limited supplies of food and presumably must seriously interfere with the program of state procurement and distribution of foodstuffs. The process of planning for increases in agricultural production is seriously affected by the unrealistic targets established for 1959.

The deterioration in the quality of Chinese Communist statistics in the agricultural handicraft sectors, although a handicap to the

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planners, is not necessarily disastrous for successful economic planning, because the more modern, highly organized sectors of the economy have so far resisted the pressures that broke the system in these other sectors. Overstatements of production of food end up as non-existent peasant "consumption" and do not necessarily affect the actual procurement and transportation of food on which plans for budget revenue, transportation requirements, and the supply of food to urban areas depend. Overstatements of local handicraft production of producer goods lead to nonexistent local uses of this output. The allocation and distribution of investment goods for the national investment program still depend largely on production in relatively large-scale enterprises where the statistics are still fairly reliable. In short, the authorities in their planning probably are somewhat embarrassed by the faulty data, but they are able to carry on because the central core of the economy is the area least affected by the deterioration in statistics.

Even if the regime was initially deceived by its own statistical system, reports on actual levels of peasant consumption, reports from procurement agencies, and other data available in late 1958 and in the first half of 1959 must have revealed to the central statistical authorities serious inconsistencies between the claims for increases in food crops and the actual situation. It is certain that the central statistical and planning officials: (1) realize that many claims of huge increases in agricultural and handicraft production are exaggerated; (2) scale down these claims in those instances where they affect plans for such interrelated activities as transportation, investment in food-processing industries, and the honoring of export commitments; and (3) recognize that it would be inviting trouble for themselves to check back down through channels on figures that had originally been approved by the various layers of Party and government representatives. These considerations do not mean that the Chinese Communists "keep two sets of books," but they do suggest that the planners have to distinguish in the back of their minds between figures that are reliable and figures that have been greatly exaggerated for political purposes. These considerations also suggest that over the next year or two some of the most notorious "leap forward" figures, such as the 375 million tons of food grains, will receive "lip service" from the economic planners but will have little effect on the planning itself.

The problems of interpreting Chinese Communist statistics become more difficult but certainly not impossible. Care must be taken to compare figures for production from the agricultural and handicraft sectors with related figures from the sectors which have more trustworthy data. For example, figures for production of grain should be compared with figures for procurement of grain, transportation of grain, and rationing of grain products in urban areas. "Reasonable man" checks, limited in number and variety only by the ingenuity of

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the analyst, are necessary. Is it reasonable, for instance, that the Chinese in 1958 could get the same yield of rice per hectare that is achieved by highly efficient Japanese farmers with the use of far greater quantities of fertilizers? In some cases the best that can be done is to establish a range of values in which the actual quantity is thought to lie. Difficulties that are likely to persist over the next few years stem in part from the formation of the communes and the resulting overturn of previous statistical methods, definitions of categories, and channels of reporting. Another set of difficulties arises from the whole "leap forward" program itself, which has rendered obsolete the presumably balanced targets of the Second Five Year Plan (published in late 1956) and which has as yet not given rise to a new, balanced set of targets.

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APPENDIX B

POPULATION VERSUS FOOD SUPPLY, 1958-62

The population of Communist China is estimated to have reached 648 million by mid-1958, after expanding since 1949 at a steadily increasing rate. At present, the annual increment to the population, calculated on a midyear basis, is approximately 16 million persons, a number almost equal to the population of Canada. It is estimated that since 1949 the mortality rate has dropped from 40 to 50 per 1,000 to 15 to 25 per 1,000 because famine and pestilence have been brought under control, but the birth rate has remained at 40 to 50 per 1,000 because the social institutions which produced a high birth rate have not been greatly modified. The annual rate of population growth probably reached a maximum of 2.5 percent in 1957-58. Projections of the population of Communist China for 1958-62 with a 2.0-percent rate of growth and with a 2.5-percent rate are presented below.

<u>Million Persons at Midyear</u>		
<u>Year</u>	<u>Rate of Growth of 2.0 Percent</u>	<u>Rate of Growth of 2.5 Percent</u>
1958	648	648
1959	661	664
1960	674	680
1961	687	697
1962	701	715

A basic, long-term problem confronting the Chinese Communists is a large and rapidly expanding population which is putting a strain on the supply of food. The large, primarily agricultural population has historically been the victim of low productivity, and consumption for the great mass of people has generally bordered on the subsistence level. Surpluses with which to increase agricultural production have always been small, and during the period of the First Five Year Plan (1953-57) the growth in agricultural production was about 2 to 3 percent per year, only slightly faster than the increase in population. Reactions to the Malthusian dilemma have resulted in attempts to deal with both aspects of the problem. In late 1956 and in early 1957 the emphasis was on reducing the population growth rate through birth control. By late 1957, however, the official line stressed that men

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were "first of all producers" and led to such labor-intensive programs as the all-out effort to expand agricultural production in 1958.

The bumper harvest in 1958 -- a year in which agricultural production was about 15 percent greater than that in 1957 -- although far below the fantastic claims, might possibly be considered a breakthrough from the situation in which agricultural production has barely kept up with the rapidly growing population. For the first time the Chinese Communists could seemingly permit an increased consumption of staple foods and at the same time allocate substantial supplies of fodder for building up production of livestock and meat. With a substantially higher level of production of basic food crops and meat, the Chinese could be in a position by the end of 1959 to permit the level of consumption of food per capita to rise significantly above the 1957 level, although the permitted increases in consumption may seem small to the average Chinese when viewed in the light of the fantastic claims for food production. Bumper harvests such as occurred in 1958, however, cannot be depended on in the future to provide a permanent solution to the problem of population and food supply, and the food situation in the first half of 1959 was hardly a cause for optimism on the part of the planners. Furthermore, an increase in food consumption is required to maintain the increased productive effort of the population. The prospects for agriculture for 1959 through 1963 are estimated to be more in the nature of consolidating and maintaining the higher level achieved in 1958. The problem for the period through 1963 is not so much one of the population outrunning the food supply as one of finding means by which rewards in the form of increased food and other consumer goods can be granted when increased efforts are demanded of the population. For the period beyond 1963, perhaps the best that can be expected -- even with "shock" efforts, greater investment channeled to agriculture, and other measures -- is an average annual rate of growth of perhaps 3 percent. Because even increases of this magnitude would provide only a narrow margin for increasing incentives of food and other consumer goods, a return to the official position of concern over the rapidly expanding population may lie ahead.

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APPENDIX C

CHINESE COMMUNIST "REASSESSMENT" OF PRODUCTION CLAIMS
FOR 1958 AND PRODUCTION TARGETS FOR 1959

A communiqué of the eighth plenary session of the Eighth Central Committee of the Chinese Communist Party broadcast by Radio Peking on 26 August 1959 admits serious "overassessment" of economic achievement in 1958. Important revisions in production figures for 1958 and in planned production figures for 1959 for the "four major targets" -- grain, cotton, steel, and coal -- were announced. The following tabulation compares the revised Chinese production claims for these four commodities for 1958 and revised production targets for 1959 with the original claims for 1958 and the original targets for 1959 presented to the National Peoples Congress in April 1959:

Commodity	Million Metric Tons			
	1958		1959	
	Original Claim	Revised Claim	Original Target	Revised Target
Grain	375	250	525	275
Cotton	3.32	2.1	5	2.31
Crude steel	11.08	11.08	18	12*
Of which:				
Produced by "modern equipment"		8.0		12
Produced by "local, simple methods"		3.08		*
Coal	270	270	380	335

* Crude steel produced by "local, simple methods" is no longer included in the state plan. This type of production has received far less emphasis in 1959 than it received in 1958.

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In addition, reductions in claims for 1958 made for numbers of hogs and for less important agricultural crops -- tobacco, soybeans, peanuts, and hemp -- and downward revisions of production targets for 1959 for power-generating equipment, metal-cutting machine tools, cotton yarn, and salt have been announced by Peking. The 1959 plan for investment in capital construction was reduced from 27 billion to 24.8 billion yuan, and the number of large-scale construction projects planned was reduced from 1,092 to 788. Revised claims for 1958 and targets for 1959 for gross value of agricultural and industrial production also were announced. The following tabulation compares the revised Chinese claims for gross value of agriculture and industrial production for 1958 and the revised targets for 1959 with the original claims for 1958 and the original targets for 1959 presented to the National Peoples Congress in April 1959:

	1957 <u>Claim</u>	1958		1959	
		<u>Original Claim</u>	<u>Revised Claim</u>	<u>Original Target</u>	<u>Revised Target</u>
Gross value of agricultural production (billion yuan*)	53.7	88.0	67.1	122	74
Percent		164**	125**	139***	110****
Gross value of industrial production (billion yuan*)	70.4	117.0	117.0	165	147
Percent		166**	166**	141***	126****
Gross value of agricultural and in- dustrial production (billion yuan*)	<u>124.1</u>	<u>205.0</u>	<u>184.1</u>	<u>287</u>	<u>221</u>
Percent		165**	148**	140***	120****

* In 1957 prices.
 ** Percent of 1957 claim.
 *** Percent of 1958 original claim.
 **** Percent of 1958 revised claim.

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These announcements do not modify the major economic conclusions presented in this report, because the estimates in this report have discounted in large measure previous claims for 1958 and targets for 1959 for increases in agricultural production and to a lesser extent have discounted claims for increases in handicraft production. The revised production figures for 1958, however, represent an official admission that the previous claims were grossly overstated and give conclusive evidence that the decision made in the present report to discount previous claims was valid. The downward revision of 1959 targets for production and construction gives some clue to the degree to which it has been necessary to slacken the pace of economic expansion in an endeavor to redress the serious imbalances in the economy of Communist China which resulted from the "leap forward" campaign of 1958. The reductions in 1959 targets for gross value of agricultural and industrial production, for investment in capital construction, for the number of large-scale construction projects, and for commodity production suggest that a less optimistic attitude toward the outlook for the Chinese economy for 1959 is in order and that the increase in GNP in 1959 may be on the lower end of the range of 12 to 15 percent given in this report. In spite of the downward adjustments of 1959 targets, however, the Chinese Communists still insist that 1959 will be another year of "leap forward" and have initiated drives for increased production, stricter economy, and elimination of rightist thinking in order to fulfill the revised goals for 1959.

Revision of production claims for 1958 tends to support the view that reliable statistics are needed for the efficient operation of a planned economy. The deterioration in the quality of statistics in the agricultural and handicraft sectors of the economy was not necessarily disastrous for successful economic planning, but it must have been a handicap to the planners in formulating the annual economic plan for 1959 and would have presented even greater problems to the planners in their current task of compiling the 1960 plan. An indication of pressure having been exerted for the compilation of reliable statistical data can be found in the statement in the communique of the Central Committee that the revised claims for 1958 resulted from repeated "checkups" made in the first half of 1959. In addition, the fantastic nature of the claims for 1958 and the targets for 1959 for production of grain, especially in the light of continuing food shortages, must have been recognized by the Chinese Communist leadership. Publication of the retreats on the 1958 figures was made to insure that announcements of achievements in 1959 not only will be more reasonable but also will be consistent with 1958 results.

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It is believed that the revised grain figure for 1958 is still overstated. A 15-percent to 20-percent increase above the level of production in 1957 continues to be the maximum increase believed possible, but the revised claim represents a 35-percent increase. Likewise, the revised target for production of grain is still too high because it is based on the inflated production claim for 1958 and because an increase of 10 percent in production of grain in 1959 is not likely. In view of the floods and droughts of the first 8 months of 1959, the Chinese will be extremely fortunate not to suffer an actual decline in production of grain in 1959. The new Chinese cotton figure for 1958 of 2.1 million tons is even less than the estimate contained in this report -- 2.5 million tons on the basis of data on procurement. The 1959 target for production of cotton of 2.31 million tons is reasonable. The revised claims for 1958 indicate the following increases in production compared with the level in 1957: tobacco, 48 percent; soybeans, 4 percent; peanuts, 9 percent; and hemp, 3 percent. The claims for increases in production of tobacco, peanuts, and hemp are accepted, but it is believed that production of soybeans declined in 1958.

The new figures for crude steel produced by "modern equipment" correspond closely to the estimates for commercially acceptable crude steel contained in this report. The elimination from the 1959 state plan of crude steel produced by "local, simple methods" confirms the conclusion that the "backyard" steel program has for the most part been abandoned because of its poor product and high costs of production. The 1959 target for production of steel of 12 million tons is judged to be feasible and represents an increase of 4 million tons in production of crude steel in one year.

The 1958 figures for production of coal were not changed and are believed to be fairly reliable. About 40 percent of the expansion in production of coal in 1958, however, came from native workers, representing a tenfold increase in production of coal from mines of this type. Revision of the 1959 target for production of coal probably reflects a planned cutback in production by these native workings which operate under local government authority. The planned cutback in production of coal in 1959 probably is closely related to the abandonment of the "backyard" steel program and should have no adverse effect on production of crude steel in relatively modern plants and on the operation of the rail transport system.

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APPENDIX D

STATISTICAL TABLES

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Table 1

Communist China: Gross National Product, by End Use
1957-58

End Use	Billion Yuan in Current Market Prices		Percentage Distribution	
	1957	1958	1957	1958
Personal consumption expenditures	79.3	87.0	68.7	62.8
Gross domestic investment	24.4	39.4	21.1	28.4
Net foreign investment	0.6	1.2	0.5	0.9
Government purchases of goods and services	11.2	10.9	9.7	7.9
Total gross national product	<u>115.5</u>	<u>138.5</u>	<u>100.0</u>	<u>100.0</u>
Index of gross national product (1957 = 100)	100	120 a/		

a. The Chinese Communists have claimed that market prices were stable in 1958. Table 2, p. 63, below, computed in constant prices, gives approximately the same rate of growth, suggesting that average prices in 1958 were indeed at about the same level as in 1957

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Table 2

Communist China: Gross National Product, by Sector of Origin
1952, 1957, and 1958

Economic Sector	Billion Yuan in 1957 Prices			Percentage Distribution		
	1952	1957	1958	1952	1957	1958
Agriculture a/	45.0	50.8	59.2	57.7	47.7	45.8
Industry (including individual handicraft)	9.0	18.8	26.3	11.5	17.6	20.3
Construction	1.7	4.2	6.4	2.2	3.9	5.0
Modern transport and communications	1.9	4.5	6.3	2.4	4.2	4.9
Trade, native transport, and miscellaneous business services	10.4	16.4	19.0	13.3	15.4	14.7
Government	4.4	4.6	4.3	5.7	4.3	3.3
Consumer services and house rent a/	5.6	7.3	7.8	7.2	6.9	6.0
Gross national product (at factor cost)	<u>78.0</u>	<u>106.6</u>	<u>129.3</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Indirect taxes	4.0	7.6	9.7			
Gross national product (at market prices)	<u>82.0</u>	<u>114.2</u>	<u>139.0</u>			
Index of gross national product (1952 = 100)	100	139				
Index of gross national product (1957 = 100)		100	122			

a. Imputed agricultural services are included under consumer services and house rent.

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Table 3

Communist China: Estimated Production of Selected Agricultural Commodities
1952 and 1957-58

Commodity	Million Metric Tons		
	1952	1957	1958
Rice	75	86.7	105
Wheat	22	23.5	30
Other grains	53	54.5	55
Tubers (grain equivalent)	18	20.3	30
Total grains	<u>168</u>	<u>185</u>	<u>220</u>
Soybeans	9.5	10.0	8.4
Sugarcane	7.1	10.39	13.52
Sugar beets	0.48	1.50	2.9
Peanuts	2.32	2.56	3.42 <u>a/</u>
Rapeseed	0.93	0.88	1.1
Sesame seed	0.52	0.33	0.27
Cotton (ginned)	1.30	1.60	2.50 <u>a/</u>
Tobacco (flue-cured)	0.22	0.26	0.46 <u>a/</u>

a. For the claims for production of peanuts, cotton, and tobacco in 1958, which were revised by the Chinese Communists in August 1959, see Appendix C.

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Table 4

Communist China: Estimated Production of Ferrous and Nonferrous Metals
1952-59

Commodity	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Pig iron ^{a/}	Million metric tons	1.93	2.23	3.11	3.87	4.83	5.94	13.69	23.0
Crude steel ^{a/}	Million metric tons	1.35	1.77	2.22	2.85	4.46	5.35	11.08	18.0 ^{b/}
Finished steel ^{c/}	Million metric tons	1.11	1.48	1.74	2.22	3.42	3.8	4.6	9.2
Iron ore (50 to 55 percent Fe)	Thousand metric tons	3,900	4,800	6,200	7,614	12,890	14,900	20,000	40,000
Tungsten (concentrate, 65 percent WO ₃)	Thousand metric tons	15.8	17.4	19.0	20.5	22.1	30.0	30.0	N.A.
Manganese ore (+35 percent Mn)	Thousand metric tons	190.6	195.0	172.2	196	400	469	534	700
Molybdenum (metallic equivalent of MoS ₂)	Thousand metric tons	1.0	1.0	1.0	1.2	1.5	1.6	4.8	N.A.
Copper (refined)	Thousand metric tons	9	13	15	15	14	14	30	N.A.
Tin	Thousand metric tons	14	15	16	18	19	26	30	34
Lead	Thousand metric tons	5.0	8.8	15	16	17	31	35	N.A.
Zinc	Thousand metric tons	5.0	7.5	9.8	13	15	19	25	N.A.
Antimony	Thousand metric tons	10	11	11	12	12	12	12	N.A.
Mercury	Thousand flasks of 76 pounds	3.0	5.0	11.0	20.0	24.0	25.0	25.0	N.A.
Aluminum	Thousand metric tons	0	0	2	10	15	40	40	40
Fluorspar	Thousand metric tons	120	125	125	125	130	130	140	N.A.

a. Including production in small local plants.

b. For the target for production of crude steel in 1959, which was revised by the Chinese Communists in August 1959, see Appendix C.

c. Excluding production in small local plants.

Table 5

Communist China: Estimated Production of Fuels, Power, and Construction Materials
1952-59

Commodity	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Electric power	Billion kilowatt-hours	7.26	9.3	11.0	12.3	16.6	19.3	27.5	40.0
Coal <u>a/</u>	Million metric tons	66.49	69.68	83.66	98.30	110.36	130.0	270.0	380.0 <u>b/</u>
Coke	Million metric tons	1.88	2.38	4.50	5.50	5.57	7.46	8.50	16.0
Crude oil									
Natural	Million metric tons	0.18	0.30	0.41	0.48	0.64	0.91	1.39	2.4
Synthetic	Million metric tons	0.26	0.32	0.38	0.49	0.52	0.55	0.87	0.9
Total	Million metric tons	<u>0.44</u>	<u>0.62</u>	<u>0.79</u>	<u>0.97</u>	<u>1.16</u>	<u>1.46</u>	<u>2.26</u>	<u>3.3</u>
Finished petroleum products									
Gasoline	Million metric tons	0.13	0.17	0.19	0.25	0.33	0.38	0.50	0.69
Kerosine	Million metric tons	0.05	0.07	0.09	0.12	0.14	0.18	0.27	0.52
Diesel fuel	Million metric tons	0.02	0.03	0.04	0.05	0.06	0.08	0.14	0.28
Lubricating oil	Million metric tons	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.12
Residuals (fuel oil, asphalt, coke, and other residuals)	Million metric tons	0.29	0.42	0.50	0.69	0.76	0.87	1.24	1.31
Total	Million metric tons	<u>0.50</u>	<u>0.71</u>	<u>0.85</u>	<u>1.15</u>	<u>1.34</u>	<u>1.57</u>	<u>2.22</u>	<u>2.92</u>
Cement	Million metric tons	2.9	3.9	4.6	4.5	6.4	6.9	9.3	12.5
Timber <u>a/</u>	Million cubic meters	11.2	14.2	16.0	20.5	20.6	27.9	35.0	50.0

a. Including handicraft production.

b. For the target for production of coal in 1959, which was revised by the Chinese Communists in August 1959, see Appendix C.

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Table 6

Communist China: Estimated Production of Selected Machinery and Equipment
1952-59

Machinery and Equipment	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Machine tools (excluding simplified machine tools)	Thousand units	13.7	20.5	15.9	13.7	25.9	28.3	50 a/	60
Cotton spinning machinery	Million spindles	0.38	0.29	0.49	0.30	0.78	0.49	1.00	2.00
Cotton looms	Thousand units	6.47	9.65	15.12	9.29	19.25	15.0	31.0	60.0
Agricultural machinery (new type only)	Million units	0.30	0.34	0.43	1.30	2.10	0.55	1.40	N.A.
Irrigation pumps	Million horsepower	0.06	0.07	0.08	0.08	0.09	0.15	0.5	2.0
Metallurgical equipment	Thousand metric tons	N.A.	N.A.	N.A.	N.A.	N.A.	13	30	55
Mining equipment	Thousand metric tons	Negligible	N.A.	N.A.	N.A.	N.A.	0.4	1.5	6.0
Petroleum drilling equipment	Thousand metric tons	N.A.	N.A.	N.A.	1.6	3	4	5	8
Antifriction bearings (factory production only)	Million sets	1.18	N.A.	N.A.	N.A.	4.4	6.0	13.3	21.0
Engines (including diesel, gasoline, gas generator, and steam)	Million horsepower	0.03	N.A.	N.A.	N.A.	0.54	0.69	2.00	N.A.

a. May include categories not previously reported.

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Table 7

Communist China: Estimated Production of Electrical and Communications Equipment
1952-59

Equipment	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Turbines, steam and hydraulic	Thousand kilowatts	6.7	17	10	69	224	216	600	740
Electric motors a/	Million kilowatts	0.64	N.A.	N.A.	1.00	1.07	1.37	1.43	1.50
Electric generators a/	Million kilowatts	0.03	0.06	0.06	0.11	0.28	0.34	0.42	0.59
Transformers	Million kilovolt-amperes	1.17	N.A.	N.A.	2.60	2.89	3.59	3.90	4.30
Batteries	Metric tons	9	10	13	15	17	21	25	30
Electric lamps	Million units	29	32	34	36	39	43	52	62
Electric wire and cable	Million US \$	22.9	25.4	30.7	64.1	90.4	117.2	164	230
Switchgear and switch-board apparatus	Million US \$	3.60	5.60	6.10	6.40	10.03	12.02	16.83	23.56
Electronic tubes	Million units	0.10	0.15	0.21	0.31	0.50	5.00	12.00	17.40
Wire-diffusion centers	Thousand units	0.44	0.44	0.43	0.44	0.66	0.99	2.00	2.60
Wired loudspeakers	Million units	0.27	0.27	0.27	0.27	0.41	0.62	1.34	1.65
Radio receivers	Million units	0.02	0.02	0.03	0.05	0.19	0.36	1.30	1.60
Telephone handsets	Million units	0.03	0.04	0.06	0.07	0.13	0.18	0.31	0.53
Telephone switchboards	Million lines	0.03	0.04	0.06	0.08	0.12	0.17	0.36	0.58

a. For alternating current only.

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Table 8

Communist China: Estimated Production of Chemical Products
1952-59

Commodity	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Chemical fertilizer	Thousand metric tons	194	264	354	426	663	800	1,300	1,900
Nitrogen fertilizer	Thousand metric tons	194	264	343	411	586	680	1,100	1,500
Phosphorous fertilizer	Thousand metric tons	0	0	11	15	77	120	200	400
Synthetic ammonia	Thousand metric tons	32	41	57	68	105	123	200	290
Sulfuric acid	Thousand metric tons	190	259	356	388	500	632	740	1,100
Nitric acid	Thousand metric tons	18	27	45	69	101	110	200	330
Soda ash	Thousand metric tons	192	223	310	405	485	506	640	680
Caustic soda	Thousand metric tons	79	89	116	137	156	198	270	320
Motor vehicle tires	Thousand units	417	488	701	593	783	873	1,000	1,200
Shoes (rubber)	Million pairs	60.1	70.3	78.0	89.7	95	120	132	145

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Table 9

Communist China: Estimated Performance of Modern Transport
1952-59

Sector	1952	1953	1954	1955	1956	1957	1958	1959
Million Metric Tons ^{a/}								
Tons originated								
Railroads	132.1	160.4	192.6	193.4	246.0	274	380	520
Motor trucks	20.7 ^{b/}	30.4 ^{b/}	43.5 ^{b/}	50.1 ^{b/} 49.8	79.1	101.2	176.3	304
Inland waterways (excluding junks)	9.41 ^{b/}	15.3 ^{b/}	20.5 ^{b/}	26.3 ^{b/} 26.1	35.4	40.2	56.7	80
Coastal shipping (excluding junks)	5.76 ^{b/}	5.92 ^{b/}	9.91 ^{b/}	10.4 ^{b/} 8.86	10.8	13.2	19.7	30
Total	<u>168.0</u>	<u>212.0</u>	<u>266.5</u>	<u>280.2</u> <u>278.2</u>	<u>371.3</u>	<u>429</u>	<u>633</u>	<u>934</u>
Billion Ton-Kilometers ^{c/}								
Performance								
Railroads	60.2	78.1	93.2	98.1	120.4	134.6	186	253
Motor trucks	0.678 ^{d/}	1.18 ^{d/}	1.87 ^{d/}	2.52 ^{d/} 2.51	3.49	3.79	5.29	9
Inland waterways (excluding junks)	3.64 ^{d/}	5.63 ^{d/}	7.89 ^{d/}	10.4 ^{d/} 10.2	12.9	15.1	21.3	30
Coastal shipping (excluding junks)	5.00 ^{d/}	4.66 ^{d/}	8.04 ^{d/}	8.39 ^{d/} 7.31	8.65	10.7	16.0	24
Total	<u>69.5</u>	<u>89.6</u>	<u>111.0</u>	<u>119.4</u> <u>118.1</u>	<u>145.4</u>	<u>164.2</u>	<u>229</u>	<u>316</u>

a. Physical tons unless otherwise indicated.

b. Tariff tons.

c. Physical ton-kilometers unless otherwise indicated.

d. Tariff ton-kilometers.

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Table 10
Communist China: Estimated Production of Transportation Equipment
1952-59

Equipment	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Mainline locomotives (steam)	Units	20	10	52	98	184	167	350	555
Mainline locomotives (diesel)	Units	0	0	0	0	0	0	2	20
Mainline locomotives (electric)	Units	0	0	0	0	0	0	0	10
Railroad freight cars	Thousand units	5.79	4.50	5.44	9.26	6.38	7.30	11.00	20.00
Railroad passenger cars	Units	6	50	100	200	311	350	N.A.	N.A.
Medium trucks	Thousand units	0	0	0	0	1.65	7.50	15.00	20.00
Three-wheel trucks	Thousand units	0	0	0	0	0	Negligible	0.50	0.70
Passenger cars (including jeeps)	Thousand units	0	0	0	0	0	Negligible	0.50	N.A.
Tractors	Thousand units	0	0	0	0	0	Negligible	0.96	3.00
Naval vessels	Thousand standard displacement tons	1	3	3	5	13	15	14	20
Merchant vessels	Thousand gross register tons	7	11	17	22	15	20	30	45
Inland vessels									
Self-propelled	Thousand horsepower	4	4	14	26	24	30	40	50
Non-self-propelled	Deadweight tons	14	1	26	51	93	110	130	145
Fishing vessels	Thousand gross register tons	0	0	3	6	0	Negligible	Negligible	Negligible
MIG-17 aircraft	Units	0	0	0	0	0	10	104	205
An-2 aircraft	Units	0	0	0	0	0	1	54	200

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Table 11

Communist China: Estimated Production of Consumer Goods
1952-59

Commodity	Unit	1952	1953	1954	1955	1956	1957	1958	1959
Cotton yarn (factory only)	Thousand metric tons	656	745	834	720	952	844	1,107	1,390
Cotton cloth <u>a/</u>									
Factory	Million meters	3,020	3,640	4,140	3,490	4,600	4,040	4,670	5,900
Handicraft	Million meters	1,138	1,362	1,401	1,020	1,278	1,010	1,030	1,300
Wool cloth	Million meters	4.2	6.2	7.8	10.2	14.2	18.2	26.3	28.4
Silk cloth (in- cluding man- made fibers)	Million meters	64.8	73.8	78.3	93.9	118.6	144.3	194.8	198.0
Gunny bags	Million bags	67.4	59.1	59.1	52.6	78.7	83.1	115.7	122
Cigarettes	Million cases	2.7	3.6	3.7	3.6	3.9	4.5	4.8	N.A.
Paper (machine- made)	Million metric tons	0.37	0.43	0.55	0.59	0.74	0.92	1.23	1.50
Wheat flour	Thousand metric tons	2,995	3,390	3,724	4,530	5,020	5,030	N.A.	N.A.
Sugar <u>a/</u>	Thousand metric tons	451	487	597	726	807	864	900	N.A.
Edible vegetable oils <u>a/</u>	Million metric tons	0.98	1.02	1.26	1.14	1.18	1.10	1.25	N.A.
Salt <u>a/</u>	Million metric tons	4.90	3.60	4.90	7.50	4.20	8.30	10.40	13.00

a. Including handicraft production.

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Table 12

Communist China: Estimated Capital Investment Under the State Plans, 1953-57 and 1958,
and Planned Capital Investment for 1959

Sector	Billion Yuan in Current Prices			Percent		
	1953-57	1958	1959 Plan	1953-57	1958	1959 Plan
Industry ^{a/}	27.6	13.9	17.7	56.0 ^{b/}	65.0	65.6
Railroads, communications, and post and tele- communications	9.2	2.8	5.6	18.7 ^{b/}	13.0	20.7
Agriculture, forestry, water conservancy, and meteorology	4.0	2.1	1.9	8.2 ^{b/}	9.8	7.0
Trade, finance, and banking	1.5	0.7	0.3	3.0	3.3	1.1
Culture, education, and health	4.1	0.7	0.6	8.3	3.3	2.2
Municipal construction	1.3	0.4	0.5	2.6	1.9	1.9
Other	1.6	0.8	0.4	3.2	3.7	1.5
Total	<u>49.3</u>	<u>21.4</u>	<u>27.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

a. Including building construction and geological prospecting.

b. Percentages as announced.

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APPENDIX E

METHODOLOGY

1. Estimates for 1958

The major problem in making estimates on the Chinese Communist economy for 1958 is the evaluation of the Chinese claims of greatly increased production of food grains and industrial products. The methodology used in evaluating these claims for agriculture and industry is incorporated in the text. The general issues involved in analyzing Chinese statistics are considered in Appendix A. [redacted]

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50X1

2. Estimates for 1959

A precise description of the course of economic development in 1959 is not possible, because of a continuing lack of information [redacted]. In previous years (including 1958), quarterly and half-yearly progress reports were published by the regime. These reports gave indications of how well the annual plan was being implemented. In addition, professional economic journals published by the regime in the past contained useful analyses of economic problems and prospects.

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Statements on budget fulfillment, capital investment, and value of production of agriculture and industry (in either absolute terms or percentages) from which absolute figures could be derived have not appeared in 1959. Good articles in periodicals also are lacking. The estimates for 1959 in this report, therefore, are much less firm than those for 1958. [redacted]

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50X1

In addition to these scattered items, there have been reports of remarkable economic progress in 1959 from the municipalities of Peking and Shanghai and from two provinces. The quantity and quality of Chinese Communist statistical data in 1959 still fall far short of the ideal requirements for aggregative analysis. Of the many plausible reasons for the absence of statistical reports given by the Chinese themselves, two seem most probable. First, the statistical system in Communist China may still be functioning erratically as the aftermath

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of the "leap forward" campaign, and the leadership of the regime may not actually have an accurate impression of performance in 1959. Second, the paucity of statistical information may be another example of operation of the Sino-Soviet Bloc statistical principle of "if you can't say something good, don't say anything at all."

3. Estimates for 1960-62

The original proposals for the Second Five Year Plan (1958-62) are obsolete both for purposes of Western analysis and for purposes of Chinese Communist planning and have not as yet been replaced by the outlines of a new five-year plan. The emphasis of the "leap forward" program on increased physical output almost without regard to human costs and to the proper balancing of inputs and outputs throughout the economy has further obscured the process of outlining the probable course of the economy of Communist China for the years after 1958. The conclusions drawn in this report about the last 4 years of the Second Five Year Plan period are for the most part based on such considerations as estimates of the percentages of output to be devoted to investment, the effectiveness of large-scale programs for irrigation and fertilization, and analogies with the problems of increasing production from 1952 to 1959. The conclusions, accordingly, should be regarded as furnishing only a general description of future economic developments and not a detailed blueprint.

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Figure 3



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