

Alexander Eckstein*

I. THE ROLE OF THE ECONOMIST IN THE ANALYSIS OF SOVIET-TYPE SYSTEMS

The principal preoccupation of economic analysis since the industrial revolution has been the optimum allocation of scarce resources; the optimum being usually defined in terms of two complexes of ends, improvement of material standards of living for households and/or augmentation of national power. While these two objectives are interrelated, the order of priorities would obviously differ depending upon the relative weight assigned to one as compared to the other. One might add to this another objective, namely the improvement and preservation of the social framework within which the economy functions. Depending upon one's vantage point, we can view this either as a necessary condition for the attainment of the aforementioned ends, or as an end in and of itself. To the extent that the course of national economic development and the social framework within which it operates necessarily has an impact upon forces external to it and in turn is affected by these outside forces, economists have for a long time been interested in this pattern of interdependence, particularly as far as it impinges upon international trade theory and policy.

With the emergence of new challenges in the post-World War II period, the focus of some of these preoccupations shifted, while the range of policy problems confronting the economist widened considerably. These challenges posing a long term threat to the forementioned social framework revolve around rapidly growing international instability generated largely by the:

- (a) emergence of a large number of new nation states dedicated to rapid economic development
- (b) presence and persistence of wide differ-

entials in the interspatial distribution of income

- (c) growing power of the Soviet Bloc as a result of its territorial expansion (into Eastern Europe and China) on the one hand and its rapid economic development on the other.

In the face of this, U. S. policy has been more or less designed to promote (a) and lessen (b) within a non-totalitarian framework and to contain (c). Thus, analyses of the Sino-Soviet Bloc's economic development assume prime importance from two interrelated points of view: an assessment of economic capabilities for internal growth and external expansion and the relevance of Bloc development strategy as a model for non-totalitarian underdeveloped areas.

Concretely this then involves quantitative studies of past performance, rates and patterns of growth on an aggregate and sectoral basis, and appraisals of economic efficiency and rationality in resource allocation, planning, and management. Explorations along these lines pose, in turn, a host of fascinating economic issues. In this category one might cite the need for analyzing the efficiency criteria and the "rules of the game" under which firms in Soviet-type systems operate. A similar type of problem revolves around the dilemmas posed by central planning, particularly from the point of view of the optimal degree of centralization or decentralization of decision making, optimum, of course, being clearly defined in terms of some objective. The role of pricing and the market mechanism in resource allocation needs to be explored.

Many first rate studies of this type are now available for the Soviet Union, particularly on various aspects of growth performance, while China is still almost a *tabula rasa*. Why should this be a matter of concern to economists? Apart from the need for an assessment of Chinese eco-

*Professor of Economics, University of Michigan.

conomic performance and capabilities, does Mainland China's economic development under Communist auspices pose any new issues for the economist, issues which he could not study as -- or more -- effectively in the Russian setting? This indeed would be the case if the economy of Mainland China were a carbon copy of the Soviet model. In fact, however, in China we encounter an underdeveloped Soviet-type economy with the accent on "underdeveloped." Vast differences in the factor endowments of Russia and China, most dramatically illustrated by the differences in population dynamics, have far-reaching implications for what may be optimal strategies of development for the attainment of similar goals in the two settings.

II. DEVELOPMENT STRATEGY IN COMMUNIST CHINA

During the first Five-Year Plan period (1953-57) Chinese Communist policy makers pursued an essentially Stalinist strategy of economic development with local adaptations. However, given the vast differences in factor endowments of Mainland China in the fifties as compared to the Soviet Union of the twenties, Chinese planners were forced to modify significantly their original approach. They thus evolved a new strategy for the second Five-Year Plan (1958-1962), based on intensive utilization of underemployed labor combined with promotion of technological dualism, as a means of maximizing the rate of economic growth.

Despite five to eight years of rapid industrial growth accompanied by relatively non-violent collectivization, Chinese Communist policy makers approached the end of their first Five-Year Plan with some serious unresolved problems on their hands. Within this context, they began to grope for a new development strategy, one that would provide a way out of the dilemmas facing them. The most intractable issue confronting these policy makers was agricultural stagnation. Farm production grew only slowly, possibly just sufficiently to keep pace with population growth. Unless this trend could be reversed, agriculture

would increasingly retard the pace of industrialization in a more or less closed economy. Therefore, Chinese Communist planners were seeking a strategy which would promote growth in farm production without significant diversion of investment funds from industry to agriculture.

The problem was aggravated by the rising rate of population growth and the increasing pressure of population on arable land resources. The frantic search for an escape from the "low level equilibrium trap" was thereby only accelerated. All of these problems converged in the course of 1957 when the pressure on domestic saving was also rising, due to the approaching exhaustion of Soviet credits to China.

The essence of the problem facing China's planners was most succinctly defined by Eckaus in the following terms:

"Suppose that the respective demands for output are such that a large part of the available capital is drawn into the capital-intensive and fixed coefficient sector. The amount of labor which can be absorbed in these sectors is dependent on the amount of capital available. Since capital is a scarce factor, labor employment opportunities in this sector are limited by its availability rather than by demand for output. The relatively plentiful labor supply is then pushed into the variable-coefficient sector and absorbed there as long as the marginal value productivity of labor is higher than the wages it receives."

It is against this background that a new development strategy began to crystallize in 1958, one better suited to China's factor endowments on the one hand and her planners' scale of preferences on the other hand. At its core, this strategy involved mass mobilization of underemployed rural labor on a scale not attempted before, even in China.

This additional labor was to be largely used locally for three purposes: (1) labor intensive investment projects such as irrigation and water reclamation, (2) more intensive methods of agricultural production based on greater applica-

tion of labor designed to increase unit yields through closer planting, more careful weeding, etc., and (3) development of small-scale industry. Moreover, all of this was to be accomplished by preventing leakages into consumption, thus capturing all of the increase in marginal product at zero marginal cost. The prevailing slogan was "Build Much from Nothing."

Of course, none of these were entirely new measures. Mass labor projects are based on an ancient tradition in China and have only been perfected and rationalized by the new Communist regime. However, rural mobilization prior to 1958 was much less comprehensive and systematic than it has since been.

One of the interesting by-products of this new strategy was a shift in Chinese population policy. Apart from doctrinal incantations against Malthusianism, up to 1955 the Chinese Communist leadership apparently paid little attention to the population problem. However, rising rates of natural increase, primarily due to a reduction in mortality rates, forced a re-evaluation in population policy. As a result, some birth control measures were instituted between 1955 and 1957. Yet, this new population policy was only halfheartedly pursued since the leadership could not make up its mind whether to follow its doctrinaire bias and treat population as a productive resource, as a source of labor supply, or whether to stress its role as an actual and potential impediment to increasing saving and investment.

With the new emphasis on labor as a productive resource, population policy was reversed and population again was viewed as an asset rather than a liability. This is most clearly illustrated by the following quote from Liu Shao-ch'i: "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 when there is a large population there is also the possibility of greater production and accumulation."

It was already indicated that the development

of small-scale industry was one of the uses to which the rural underemployed were to be put. While small-scale industry has been traditionally a subsidiary occupation for the Chinese farm population, it was mostly confined to weaving of textile cloth and other handicrafts. Within the context of the new strategy, Chinese Communist planners viewed it as one of the principal means for increasing the rate of industrial growth. In effect, they concentrated on the simultaneous development of two distinct industrial sections--a modern, large-scale capital intensive sector based on fixed factor proportions and a small-scale labor intensive sector based on variable factor proportions. In pursuit of this policy of technological dualism, or "walking on two legs" as it is officially termed in Chinese Communist writings and pronouncements, the expansion of small-scale industry was promoted in a number of sectors such as iron and steel, machine shops, fertilizer production, power generation, coal extraction, in addition to the more traditional textile and food processing industries.

The strategy of dualism was, however, not confined to its purely technological and factor proportions aspect. On the contrary, it seems that the model was extended to incorporate the notion of rapid development of a national economy, but based on two almost separate economies within it, only loosely linked through interregional and rural-urban trade. According to this concept, the state would concentrate the preponderant bulk of its investment resources on the development of the modern sector. This is a sector with a high reinvestment quotient, with practically all of this reinvestment to be channelled into continuing growth of itself. At the same time, the diversion of output from the modern to the rural sector was to be minimized. Therefore, the expansion of the rural sector should be a function of its own output and investment.

Small-scale industry was to be developed by using (a) simple equipment manufactured locally, (b) local labor, and (c) local raw materials. The output of these industries would then be used to satisfy the rural demand for manufactured

consumer goods and agricultural requirements for production requisites. The rural sector was thus to be pushed into involuntary and partial autarchy. Partial, in the sense that while the rural sector should not import from the modern sector, it would be expected to provide a large, unrequited export surplus to it. Thus, the rural sector would need to save enough of its current income to finance its own development while contributing to the growth of the modern sector.

How literally and with what results has this new strategy been implemented in Communist China? Attempts to apply it in its purest form were most pronounced in 1958, particularly in the second half of that year. As the strategy evolved, the policy makers were clearly groping for an institutional instrument suited to mass mobilization of rural labor along lines outlined above, since the existing institutional framework of agriculture was not adapted to an effective implementation of the model.

By the end of 1956, practically all of Chinese agriculture was encompassed by small collectives (officially termed "producers' cooperatives of the advanced type") of 35 to 100 households each. Management, supervision and control of such a vast number of small units placed a considerable strain upon the administrative and party apparatus. Moreover, their proliferation and small size made them ill suited as units of mass labor mobilization and utilization. Therefore, during 1958 a number of such small collectives were merged to form communes. These new units were sufficiently large to (a) harness major labor intensive projects beyond the resources of the collectives and (b) integrate agricultural production with the mass labor projects on the one hand and the development of small-scale industry on the other. At the same time, the communes served not only as an instrument for the better utilization of the existing labor force, but also for augmenting the labor force with women released from housework. Last, but not least, the task of managing consumption controls and preventing leakages must have appeared easier with a smaller number of large units.

In its first year (i.e. 1958), the application of the new strategy, coupled with the organization of communes, was characterized by improvisation, lack of realism, misstarts and a great deal of waste. This was perhaps most pronounced in the mass movement to produce iron and steel in the back yard. As is well known by now, the quality of the resulting product was so defective that much of it had to be scrapped. Yet, it would be erroneous to base one's judgment of the success or failure of the strategy as a whole on this single example.

In respect to small-scale industry growth, Chinese Communist planners seem to have learned from their failures in 1958. Realizing that they overreached themselves, they continued to push vigorously for the development of these industries but on a more modest and rational basis. In the course of 1959 and 1960, considerations of technical feasibility received more attention. At the same time, it was recognized that the rural sector could not be thrown back on just its own resources; if it was to grow, it had to receive technical assistance as well as some investment goods from the modern sector. Thus, in the course of its adaptation to reality, this model--like all others--lost some of its purity.

In contrast, the attempt to raise farm yields and expand agricultural production through this mass mobilization of labor seems to have failed, as evidenced by the current food crisis. In effect, Mainland China's agricultural difficulties represent an eloquent testimony to the fact that there are no shortcuts to technological progress and technical transformation in farming.

In essence, the ingredients of China's agricultural crisis are very similar to those encountered by the Soviets in the course of their development. Agriculture was kept on a short investment ration and the reward for the peasant's labor was kept to a minimum. From the outset, the Chinese Communists were not willing to devote enough resources to develop domestic fertilizer production and/or import fertilizer in the quantities which could have significantly raised agricultural yields.

At the same time, in order to check increases in peasant consumption, constantly new forms of agricultural organization were tried out--each involving progressively tighter control by the state.

Thus, barely was land distribution completed in 1952, when various forms of producer cooperation were instituted. Then in 1955-56 the drive for collectivization was on, and just as it was completed, the drive for the organization of the communes was started. Thus, Chinese agriculture was kept in a perpetual state of uncertainty, reorganization and disorganization.

All these factors, low levels of investment, unfavorable farmer incentives, and agricultural organization, were hardly conducive to agricultural development. In the meantime, Chinese population had been growing rapidly and steadily at about a 2 to 2.5 per cent rate a year, while agricultural production was subject to sharp harvest fluctuations in response to weather. Thus, since the advent of the Communist regime, there have been three good harvests in China--in 1952, 1955 and 1958. Each of these marked the inauguration of some major new move or policy: the first Five-Year Plan in the first case, collectivization of agriculture and nationalization of industry in the second, and the introduction of the communes in the last. In turn, each of these good harvests was followed by two or more poor ones. This has given the whole pattern of economic development a rhythmic or zig-zag character, with large outpourings of effort and major surges forward at a time of favorable harvest followed by a slowing down and a pulling back afterwards.

In this sense, the unfavorable weather conditions of 1959 and 1960 were nothing unusual. However, under the impact of prolonged neglect, bad planning and mismanagement, the harvests were particularly poor. For instance, the leadership, falling victim to its own upward biased crop reporting system, thought--on the basis of the very high yields reported for 1958--that China's food requirements could be met by intensive cultivation on a much smaller acreage. Therefore, the

area sown to winter wheat and small grain was reduced substantially in the fall of 1958. This was one of the factors contributing to a poor crop in 1959.

As a means of coping with the extreme weather fluctuations, the Chinese Communists were determined to diminish the unfavorable effects of droughts and floods. They initiated the mass labor mobilization schemes of 1958 and 1959 with this in mind. But, as it turned out, unskilled labor using its bare hands could build only primitive earth dams and shallow irrigation ditches which could not withstand the force of major floods or droughts. At the same time, labor was mobilized for the production of steel in backyard furnaces and for other small-scale industry projects. This mass mobilization, however, created acute labor shortages in agriculture so that fields went uncultivated and were overgrown with weeds.

III. IMPLICATIONS FOR UNDERDEVELOPED AREAS

What are the implications of all this for other underdeveloped areas? Are any elements of the Soviet or Chinese Communist strategy applicable to underdeveloped countries pursuing different objectives, based on a different ideological orientation?

It could perhaps be said that both communist and non-communist societies are dedicated to the same long-range objectives, namely raising standards of national power and standards of living more or less simultaneously. However, these two objectives are, at least in the short or intermediate run, mutually inconsistent. The contradiction tends to be resolved in Soviet-type economies by assigning a high priority to power and downgrading welfare. Other underdeveloped areas, however, tend to follow the opposite course to varying degrees.

There is no question that a Soviet-type strategy, other things being equal, can always attain a much higher rate of savings and capital formation. But will this necessarily guarantee higher

rates of economic growth under a wide variety of conditions?

In this context it should perhaps be noted that the Soviet and Chinese Communist strategies are peculiarly well suited to large countries with vast and varied natural and human resources. These strategies are essentially autarkic in character and, to this extent at least, much less well adapted to small countries for which the actual or potential advantages of international specialization are much greater; and for which the penalties of an autarkic policy are much greater, too. This proposition seems to be borne out by the post-war experience of Eastern Europe where the imposition of the Soviet model has met with much less success than in its own habitat. In effect, a part of savings may have been dissipated through significant diseconomies due to attempts to pursue a domestically based pattern of "balanced" growth. Under these conditions high rates of capital formation were at times accompanied by low rates of economic growth.

What this suggests is that even countries which are prepared to sacrifice present for future consumption, and to disregard social costs and the surrender of individual liberties, may not necessarily reap the high rates of growth which could be expected on the basis of the Soviet experience.

What about the welfare aspect of the problem? Assuming that Soviet-type strategies are adopted in countries to which they are most suited, and granted that they sacrifice present consumption, do they not provide the optimal path for maximizing future consumption? Unfortunately, this is not a testable proposition since one would be hard put to find two countries with exactly the same factor endowments. Therefore, in comparing two situations, we would have no way of determining the extent to which the results obtained were a function of the strategy or of resource endowments.

In the case of the Soviet Union, it took roughly 35 years for the benefits of industrialization to be translated into rising levels of household con-

sumption. One might expect that given the much higher population pressure and more rapid rates of population growth, it would take longer in China. It would thus be really impossible to say whether, let us say 50 years from now, standards of living are likely to be higher in China or in a country such as India.

Turning finally to the specifically Chinese elements of the strategy, let us briefly explore their applicability to other underdeveloped areas.

Employment of the underemployed in mass labor projects at zero or quite low marginal cost requires elements of coercion and control of such vast magnitude that they are probably incompatible with nontotalitarian forms of political structure. Moreover, as was indicated above, it would seem that these projects did not really succeed in raising agricultural productivity in China.

The question may of course be posed whether this model could not still be relevant if it is applied in a less radical form, that is by combining mass labor with some equipment and by not holding the marginal wage cost down to zero. This of course is possible, but under these constraints the model becomes quite blurred and its solution indeterminate. If one introduces these qualifications one must be able to show that the value added (i.e. the margin of social benefits over the costs incurred) will be greater in this than in other types of projects. Whether this in fact is likely to be the case, particularly if one takes account of all indirect costs as well, is doubtful.

Technological dualism, on the other hand, may be of much greater importance and relevance for all underdeveloped countries suffering from heavy population pressure and experiencing rapid rates of population growth. In such a case, however rapidly modern industry is growing, it cannot possibly absorb at the same time both the existing stock of underemployed rural labor and the continuous large additions to the labor force. In this connection, it is worth while to note that, as shown in a number of studies, the degree of

population pressure in pre-industrial Asia was much greater than in pre-industrial Europe. Therefore, in this respect the industrialization experience of 19th century Europe provides an inadequate guide.

Faced with a population and employment problem of such major proportions, it could be argued that a strategy of technological dualism may represent an optimal pattern for developing countries. In effect, it permits the husbanding of scarce capital in those industries in which the gains accruing from economies of scale are greatest and which are most subject to decreasing costs. However, the capacity of these industries to absorb labor is most limited so that this task is left to industries or to certain processes of production within an industry which can operate much more easily on the basis of constant costs.

The Japanese example combined with the much shorter Chinese and Indian experience suggests that this dual pattern may become quite pronounced in the course of economic development in Asia. To the extent that this turns out to be the case, we may witness a new and perhaps paradoxical situation in which Asian countries will possess large industrial complexes well before they are industrialized in the usual sense of the term. That is, while their industrial production may be quite large, the bulk of their population may continue to be tied down in agriculture and rural sector for a long time to come.

This has certainly happened in Japan, which may provide us with another portent of the future. At the present time and for roughly another five years, Japan will be in the midst of a labor force bulge due to the entrance of age cohorts into the labor force who were born in a period characterized by high birth rates. But, since the war, Japan has experienced a drastic decline in birth rate, which means that the rate of growth in the labor force will begin to decline within a decade. At that point we may witness the beginning of the end of dualism in Japan. Barring a major and prolonged depression, labor shortages are bound to be felt, leading to competition in the labor

market, narrowing of the dual wage structure and a more rapid rural exodus.

On this basis then one could speculate that Chinese and Indian economic development may be dominated by technological dualism until such time as industrialization begins to yield a restructuring of attitudes and outlook with an attendant decline in birth rates resulting therefrom.

In the Chinese case this may also mean continuingly rapid industrialization amidst chronic agricultural stagnation with the economy as a whole advancing by spurts and halts under the impact of market harvest fluctuations. From this point of view, the current agricultural crisis and the attendant slowing down in the rate of economic growth may be regarded as more or less temporary. It may be expected to last until another favorable harvest widens the regime's room for maneuver once more and enables it to mount another push forward.

IV. THE NATURE AND QUALITY OF THE DATA

From what was said above, it becomes clear that the Chinese experience presents a number of analytical and policy issues, e.g. dualism as a development strategy, not previously encountered in the Russian case. Granting this, questions may be raised as to whether there is sufficient information available on the different aspects of Mainland China's economy to permit systematic study.

Both *a priori* and on the basis of empirical observation, one can conclude that the quality and scope of statistical services in any country are correlated with the level of economic development, the efficiency of the state apparatus, and the degree of government participation and intervention in the economy. Of course, these variables themselves, particularly the first and the second, are in turn mutually interdependent. This generalization is certainly borne out by the Chinese experience. In China the problem of statistical reporting has been greatly complicated by the fact that since the collapse of the Manchu dynasty

in 1911, and up to the arrival of the Chinese Communist regime in 1949, no central authority was capable of exercising full and effective control over all provinces of Mainland China. As a result, pre-Communist Chinese statistics were particularly inadequate.

Actually, the quality of these statistics varies widely among economic sectors or regions. Data on foreign trade can be considered as more or less satisfactory and usable over an extended period. On the other hand, production statistics were very poor, especially in industry, owing to incomplete coverage and low degree of reliability. In agriculture, area planted and farm production were consistently underestimated. There had never been a complete census of population, agriculture, or manufacturing prior to 1953, so that in most fields exclusive reliance had to be placed upon sampling studies. Many of these were so restricted in scope that no valid generalizations could be drawn from them. This inadequacy has not, unfortunately, inhibited generalization at any time, and accounts for the sharp controversies and the radical differences in the assessment of a number of economic problems. The contradictory estimates of population, degree of tenancy and a number of other variables are based on the reading of partial and highly conflicting evidence.

As a general rule, the coverage and reliability of statistics in the thirties and early forties is much better for Manchuria than for China proper. As a matter of fact, Manchurian data are much closer to Japanese than to Chinese statistical standards. This does not mean that even they can be used uncritically, since there are frequently wide discrepancies in the series compiled by the South Manchurian Railway Administration and by the Manchukuo Government. For the most part, these divergences are a function of differing coverage and definition, which, unfortunately, are not always specified.

There is no question that with the coming of Communism to China, the efficiency of statistical organization and data collection was consider-

ably improved. It would indeed be surprising if it were not so in view of the centralized administration, the increasing scope of the nationalized economic sector, and the ever-widening spheres of economic activity encompassed by central planning. Of course, the building of a statistical organization and of a data-collecting network cannot be accomplished overnight and there are many indications that Chinese Communist statistics were at first confused and grossly inconsistent. Lacking time systematically to collect information anew, they continued to use prewar data. This, for instance, was the case with population and acreage figures in food crops. However, the situation changed perceptibly with the establishment of a national bureau of statistics late in 1952. Improvement was further accelerated by the preparations for the first Five-Year Plan, by the population count taken in mid-1953, and by the gradual, nationwide standardization of accounting procedures in state enterprises, in government organs, and in fiscal administration. Paradoxically, many of the inconsistencies in Chinese Communist statistics are a by-product of this change in the quality of data; but, as a rule, statistics published since 1953 are based on a broader coverage and are at the same time methodologically more consistent and sounder.

Yet, there is no question that in spite of these improvements, many areas of economic activity remain inadequately covered to the present day. In general, data for the high priority sectors tend to be much better than for the segments considered unimportant. Similarly, activities falling within the purview of the state plan are more adequately accounted for than those outside the scope of the plan, so that data for the public sector are more reliable than those for the private sector, and within the private sector there is more and better information on large-scale modern undertakings than on the so-called "individual economies" like peasant farms and small handicraft establishments. Moreover, whatever the sector, aggregative value data tend to be less trustworthy and more difficult to check than highly disaggregated physical output series.

It would, however, be erroneous to conclude that physical output series can be automatically accepted at face value. For instance, there seems to be some evidence that crop production figures contain a strong upward bias, since they were incomplete for the early years, and may in part reflect progressively more adequate statistical coverage, rather than an increase in yields and/or in areas harvested. Similarly, the coal figures appear to be somewhat questionable, particularly as compared to prewar data. It is possible that currently reported production figures refer to unwashed coal while those for the prewar period were in terms of washed coal. Comparisons of pre- and post-Communist figures are manifestly of dubious validity with respect not only to coal, but to cotton yarn and a number of other products because of the methodological and definitional changes noted above.

In Chinese Communist statistical reporting one may detect an inverse correlation between quality of data and degree of statistical camouflage. It would seem that the more confidence the compilers have in their data the more clearly and unequivocally are they presented. On the other hand, marked inconsistency and conceptual obscurantism are frequently associated with statistical groping by the planning and statistical organs themselves. There are, of course, no regular statistical yearbooks, and no systematic statistical reports of the type we are generally accustomed to for most of the non-Bloc areas. However, since 1953, there are two reports published each year: the annual budget report which gives revenue and expenditure totals and breakdowns in value terms, and the annual communique of the State Statistical Bureau on plan fulfillment, very much patterned on the Soviet model of statistical reporting. Up to mid-1955, when the first Five-Year Plan was submitted to the National People's Congress, most of the data released were in percentage or index number form with the physical quantities or values for the base year unknown or highly conjectural. However, in connection with the publication of the Five-Year Plan, a vast array of production data as well

as hitherto unpublished value categories were released, not only for the period covered by the FYP (1953-1957), but for the preceding years as well, and particularly for 1952 as the last pre-plan year.

In effect, one could characterize the pre-Communist period as one during which the preconditions for adequate data collection were absent, but during which statistics were being published more freely than now. Yet, even then, basic economic information was occasionally suppressed. On the other hand, the technical improvement in statistical organization and reporting under Communism is accompanied by greater statistical secrecy combined with systematic attempts at statistical camouflage. In this respect, the situation facing the investigator analyzing economic developments in Communist China is more complex and difficult than that confronting the Soviet specialist. Not only were pre-World War I Russian statistics more extensive and more reliable, but there were great advances in quality and proliferation in the reporting and publication of data during the first two decades of Soviet rule. The flow slackened during the later thirties and continued to do so during and after World War II. It was these restrictive and secretive post-World War II Russian statistical standards which were adopted from the outset by Communist China. However, beginning in 1955, there were, as indicated above, definite signs of relaxation in the severity of Chinese Communist publication policy, but this relatively liberal course was reversed in late 1959.

All of this still leaves the question unanswered as to whether Chinese Communist statistics are credible. Could not the published data be outright falsifications or fictions presented for propaganda purposes? Do not the Chinese Communists keep in effect two sets of books, one for economic planning and administration, and another for public consumption? While one cannot categorically rule out this possibility, there is certainly no evidence to support this hypothesis, and there are a number of indications to the contrary.

The economic information and statistics published by the regime is of course presented not for its own sake, nor for the advancement of knowledge, but for certain very definite objectives. Apart from their propaganda aspects, which are the ones usually emphasized, all pronouncements and publications in a Communist system serve a certain didactic function. Most frequently they serve as guides to policy, and directives for implementation to the party cadres and to the people at large. Statistics are very rarely offered disinterestedly, but most often are cited in support of specific arguments. Hence the context within which data are presented provides significant clues to understanding. Nevertheless, it is very difficult to envisage how a huge bureaucratic apparatus in vast countries such as China or Russia could function in a system of double bookkeeping. Two sets of economic plans and targets, or two sets of reports about plan-fulfillment, would certainly tend to create or aggravate administrative confusion throughout the state and party structure.

Besides, the process of statistical collection and reporting constitutes an integral part of the operating economic mechanism. Accounting data are needed to assess the performance of individual plants, enterprises, and industries; at the same time, they are an essential prerequisite for allocation of resources and for planning. In effect,

these are needed by the economic and social engine to keep functioning. In order to keep two sets of books, and maintain their functional distinction, a special government agency would have to be organized, charged with the task of deliberately falsifying statistics and then presenting them to the world in a manner which would be mutually self-consistent.

This is not to suggest that all Chinese Communist statistics published are in fact internally consistent or that they can be necessarily taken at face value. What statistical discrepancies there are do not seem, generally, to be the products of outright falsification, but rather of conceptual obscurantism, methodological vagueness, and shifting definitions and coverage. The statistical sins of Communist regimes are more frequently those of omission rather than commission. Poor performance, unfavorable developments, and outright failures tend to be camouflaged or not reported at all, while accomplishments may be presented in a misleading context to create the most favorable impression possible. In such a situation, the task of the investigator is to penetrate behind the maze of statistical concealment and methodological bias; if he is willing and able to employ in the task patience, ingenuity, and skill, he should be in a position to dissipate the mirage.

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