

Conditions and Prospects for Economic Growth in Mainland China: Some Comments

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I

About three years have passed now since my study of China's growth prospects was completed. The work was done before the Chinese mainland authorities published any detailed statistics, so that in many cases even the most elementary production series had to be estimated on the basis of "peak" performance data in combination with published index numbers which at times were mutually inconsistent. Beyond these statistical difficulties, it is always hazardous to attempt growth projections for economies which are in the process of particularly speedy transformation so that the parameters themselves are subject to continuous and rapid change.

Since 1953, China has become more deeply immersed in comprehensive and long-range planning, she has launched and almost completed a full-blown collectivization program in agriculture, and has proceeded a long way towards completing the socialization of industry and trade through the device of the joint private-public enterprises. At the same time, as the system of statistical reporting and organization improved, more and more data began to be published. Therefore on both of these accounts, one's perspective in examining economic growth and assessing prospects for future development in China is naturally different as of mid-1957 than of mid-1954. Yet the essential outlines of the analysis in Chapters 12 to 14 of *The Prospects for Communist China* seem to me to be still valid with one notable exception; i. e. the collectivization experience and its economic effects.

Against this background and in view of the fact that a Japanese translation of the *Prospects* was recently published, I would like to: (a) examine some of the economic implications of this

collectivization experience, and (b) discuss the methodological or theoretical structure of my growth model in the light of some of the criticisms advanced by Japanese economists working in this field¹).

II

From an economic point of view, collectivization can be viewed as a means of enforcing a high rate of involuntary saving in agriculture. Or to put it another way, it is a mechanism which facilitates the extraction of an unrequited export surplus out of agriculture. This export surplus is obtained in two general ways, through the taxing system and through the price mechanism; that is through direct agricultural taxation in kind and through manipulation of price relations in such a way as to turn the terms of trade against agriculture. To accomplish the latter, the state trading organs and their local agents—the marketing and supplying cooperatives—use their monopolistic and monopsonistic market power to buy "cheap" and sell "dear". This provides the basis for the accumulation of large "excess" profits by the state enterprises, both in industry and trade. Thus high profits of socialized enterprises in effect amount to a quasi tax, the principal—but not the sole—burden of which is borne by the agricultural sector of the economy.

While it is easy to visualize this process in theoretical terms, it is very difficult to test it empirically owing to a lack of adequate and sufficiently detailed data²). Even measurements of the direct

1) Ishikawa Shigeru, "A. Ekusutain: Chugoku Keizai no Seicho Moderu" in *Koshinkoku Kaihatsu no Riron*, ed. by Ajia Kyokai (Nikkan Kogyo Shinbusha, 1956).

Ishikawa Shigeru: "The Prospects for Communist China" in *Asian Affairs*, vol. I, No. 3, September 1956, pp. 308—314.

tax burden present many difficulties. For instance, we do not know precisely in what prices are farm tax collections accounted for in China; are they valued at, above, or probably below state purchase prices? Moreover, as far as I am aware of, no data have been published on the quantity and/or value of each farm commodity collected for tax and its aggregate value. "Grains", however, comprise a wide variety of commodities from rice to potatoes, so that the annual incidence of the tax burden will depend upon the product mix of the tax-take in a particular year in relation to the product mix or the total farm crop output.

Even greater difficulties confront the investigator who attempts to measure shifts in the price and/or income terms of trade facing Chinese agriculture. Ideally, we would need to have data on the pattern of farm consumption in kind, farm household expenditure patterns, the quantities and prices of each non-farm products purchased. Obviously, this is the kind of information that is difficult to obtain even for economically and statistically more highly developed areas than Mainland China.

While it may be hard, if not impossible, to measure accurately changes over time in rural-urban price relations, one can be fairly certain on a strictly *a priori* basis that: (a) in any one year actual rural-urban price relations do not adequately reflect the "true" scarcity relationships prevailing in the Chinese economy, and (b) this divergence between the actual and the hypothetically true exhibits a systematic bias against agriculture although the extent of this bias is not measurable.

What is the link between all this and collectivization? After all, agricultural taxes were levied and monopolistic market power was applied by state trading companies prior to the large-scale collectivization campaign of 1955. However, administration and control of an agricultural collection system is much more complex and difficult

in a system of small-scale peasant agriculture as compared to a collectivized system. It is much easier for a vast number of small units to evade taxes and it requires a much larger apparatus to collect them. At the same time, the enforcement of compulsory purchase schemes at fixed prices becomes very difficult, since there always looms the danger of a "scissors" crisis. The range within which the rural-urban terms of trade can be manipulated is likely to be much narrower in a private peasant agriculture, so that in such a system greater reliance needs to be placed upon market incentives as a means of collecting the marketable surplus. This in turn, means that more manufactured consumers' goods are required to pay for the marketed share, with the net effect that rural and aggregate consumption is higher, and conversely the supply of saving is lower, than would otherwise be the case. In effect then, one of the prime functions of collectivization is to institutionalize the process of - what Marx termed - "primitive accumulation".

These are some of the crucial issues that must have confronted Mainland Chinese planners when they instituted rationing and compulsory purchase programs and then greatly accelerated the pace of collectivization. This rapid pace and its apparent success probably constitutes one of the most significant developments in China since the advent of the Communist regime - a development of far-reaching economic consequence. On the basis of present indications, the collectivization process in Chinese mainland agriculture will have been basically completed during this year. Thus, it would seem that collectivization in China is proceeding even more rapidly than it did in the Soviet Union, and - on the basis of all the available evidence - at much lower human and resource cost. This is a development which could not be foreseen and certainly runs counter to the expectations of most observers.

These differences in pace may be illustrated by the following figures:

Therefore, it would seem that a process, the consummation of which took about seven years in

2) For an interesting attempt to investigate this problem see an article by ISHIKAWA SHIGERU in the January 1957 issue of this journal.

Proportion of Farm Households Collectivized

Year	Soviet Union	Year	Mainland China
July 1	in per cent	end of year	in per cent
1927	0.8	1954	0.0001
1928	1.7	1955	3.9
1929	3.9	1956	83.0 approx.
1930	23.6		
1932	61.5		
1937	93.0		

Sources: *Norodnoe Khozyastvo S. S. S. R., Statisticheskii Sbornik* (National Economy of the U. S. S. R., Statistical Handbook), p. 99. *Tsu kuo* weekly of Feb. 18, 1957, quoting *Kung Jen Jih Pao* of Dec. 30, 1956.

the Soviet Union, is being completed in China in about two.

The implications of these differences become even clearer if we pause briefly to examine some of the costs of Soviet collectivization. Lorimer in a thoroughgoing and careful study of Soviet population comes to the tentative conclusion that during the inter-census period of December 17, 1926 to January 17, 1939, there may have been an "excess mortality" of some five million; i. e. excess in the sense of deaths over and above that normally expected. While he concedes that this estimate may involve a certain margin of error, there seems to be little question that the excess was appreciable and that in part at least it reflects direct and indirect losses due to collectivization.³⁾ Of even greater importance from an economic point of view is the curtailment in farm output and livestock numbers during the first Five Year Plan period. While here too the data are far from perfect, it would seem that between 1927 and 1932 grain output dropped by about 10 per cent, while total farm product is estimated to have decreased by about 20 per cent. A large share of this contraction was due to a 40 to 50 per cent decline in meat production induced by the aforementioned slaughter of livestock. The following figures will serve to illustrate the percentage drop in the livestock population of the Soviet Union between 1928 and 1934-35⁴⁾.

3) Frank Lorimer: *The Population of the Soviet Union: History and Prospects*, League of Nations, Geneva 1946, pp. 133-137.

4) Naum Jasny: *The Socialized Agriculture of the U. S. S. R., Plans and Performance*, Stanford 1949, Chart Tables 4, 5, 6, and 37 in the Appen-

Horses	50%
Cattle	40%
Hogs	33%
Sheep and goats	65%

As pointed out above, thus far at any rate, there is no evidence to indicate that mainland Chinese collectivization involves such disruption and contraction in agricultural output. This does not necessarily mean that collectivization is proceeding smoothly, without any strains and stresses, but only that they are not of devastating proportions. While noting this, it must also be admitted that collectivization in China is so recent that we lack a historical perspective and that it is really too early to judge its outcome. However, assuming that current trends can be considered as indicative, it may be worthwhile to explore what are some of the factors that might account for a different collectivization outcome in Communist China as compared to the Soviet Union.

The roots of this difference may possibly be found in the relations between the regime and the peasantry in the Soviet Union. In both cases, land redistribution was the first item on the agenda of the agrarian program. However, the Chinese Communists came to power after a prolonged period of civil war, while in the Russian case the civil war came after the revolution. Thus, while the Chinese were able to carry through their land reform program undisturbed and in a systematic manner, the Bolsheviki were plagued by very acute food supply problems during the period of "war communism", and were thus compelled to resort to forced confiscation of grain and other agricultural produce. This served to alienate the peasantry from the regime, almost from the beginning, and at the same time it turned out to be counter-productive from a procurement standpoint, since it created an atmosphere in which the peasants would hide their grain, feed it to livestock, and consume it themselves, rather than surrender it to the authorities. At the same time, peasants reduced their plantings to meet only their own con-

sumption needs.

In view of this situation, the Soviet regime found it necessary to beat a tactical retreat and to institute the New Economic Policy. One of the essential features of NEP was a considerable reliance upon market incentives as a means of expanding and procuring the marketable share. But, this inevitably brought with it a strengthening of the economic and political power of the kulaks. This was actually explicitly recognized by Lenin in his statement that "We must not shut our eyes to the fact that the replacement of requisitioning by the tax in kind means that the kulak element under this system will grow far more than hitherto. It will grow in places where it could not grow before⁵." Within this context, the "scissors crisis" of the 20's was but a reflection of the dilemma facing the Soviet regime during the NEP period. It committed itself to reliance upon market incentives, but it was reluctant to pay the price in terms of reduced savings and investments. Collectivization was to point the way out of this dilemma. However, given the power of the kulaks, this course was bound to meet with strong resistance, so that if the process was to be consummated rapidly it necessarily meant a resort to violent means.

Yet, while this solution represented a short run remedy, in the long run it turned out to be but the first link in a vicious circle which has plagued Russian planners throughout Soviet history. As indicated above, one of the central purposes of collectivization was to institutionalize a high rate of saving in the economy. However, because of the curtailment in farm output and livestock numbers, the high rate of saving had to be imposed upon a shrunken farm product and income. This in turn, not only reduced rural standards of living, but undermined peasant incentives even in the collectives, and thus greatly hampered agricultural recovery. At the same time, capital had to be diverted to replace the animal draft power

lost in the process. The more agricultural recovery was hampered the greater had to be the pressure on agriculture. This situation was greatly aggravated by the sharp setback in agricultural recovery owing to World War II. As a result, it would seem that per capita gross agricultural product and grain output was at about the same level in 1954 as in 1928⁶). At the same time livestock numbers, as well as average productivity per animal was still at or below the precollectivization levels, which means that the per capita output of livestock products was appreciably below it. This is truly a pattern of industrialization at the expense of agriculture to the point where unless the Soviets are willing to place a much greater reliance upon foreign trade in general, and food imports in particular - the lag in agricultural development has become a seriously limiting factor in Soviet economic growth.

In contrast, land reform in China went so far that very few "rich peasants" were left. At the same time, by launching the collectivization campaign as soon as the land redistribution program was completed, the Chinese Communists proceeded with the more advanced stages of their agrarian program before the new and old owner-operators could consolidate their economic position, extend their landholding through purchase or renting, and accumulate wealth. Thus the potential development of a "rich peasant" or kulak class was nipped in the bud so that both the incentive and the power to resist collectivization was minimized. This was reinforced by the reliance apparently placed upon persuasion, economic incentive and disincentive, rather than force.

What are the implications of all this upon Mainland China's economic growth prospects? Unless the pattern sketched above is reversed, this could mean that - unlike the Soviet Union - Mainland China may be in a position to pursue its industrialization objectives and at the same time attain

5) "Doklad o Natural'nom Naloge 15 Marta" (Report on the Tax in Kind, March 15, 1921), *Sochineniya*, XXVI, 246.

6) Gregory Grossman: "Soviet Agriculture Since Stalin", *The Annals of the American Academy of Political and Social Science*, January 1956, pp. 62-74.

at least modest increases in farm output per capita. One could argue on an *a priori* basis that even though Soviet agriculture was kept on a rather short investment ration - with the bulk of investment being labor and livestock displacing, rather than yield increasing - and was subjected to an unfavorable incentive structure, barring the setbacks of collectivization and World War II, farm output would have expanded appreciably. In these terms then, one might expect that unless the Chinese suffer such setbacks, they may be able to pursue the Soviet development model without being compelled to apply the same degree of pressure on agriculture and on the consumer sector in general. This in turn could mean that, *ceteris paribus*, the Chinese could place greater reliance upon incentives, even in agriculture, than the Soviets were able to do. In effect then, it may turn out that Chinese Communist agricultural policy will bear as much family resemblance to the Japanese as to the Soviet experience.

III

On the basis of these assumptions agricultural supply prospects may be expected to be more favorable than could be anticipated some years ago. If there really turns out to be a minimum disruption in agriculture, it is quite possible that through better organization and capital-cheap inputs, modest increases in yields may be attained. What about the demand side of the equation? Would this output be expanding at a rate adequate to meet rising requirements owing to population growth, urbanization, and export demand? While it would be beyond the scope of this article to attempt an answer to this problem, it may perhaps be appropriate to examine briefly the more general theoretical question as to what are the factors or variables that determine the level of consumer demand in a comprehensively planned economy. More specifically, need changes in national income and household consumption, or the food component thereof, be necessarily related functionally?

It would seem to me that the answer would have to be in the negative. Given the short and inter-

mediate-term development objectives in Soviet type economies, functionally related increases in national income and levels of house-hold consumption can be viewed as representing failures in the efficacy of planning. To the extent that food consumption actually increased in 1953 as a result of Mainland China's economic recovery, this represented an undesired development from the planners point of view - i. e. a development that called for counter-measures as evidenced by the introduction of the compulsory grain purchase schemes and rationing in the fall of 1953. Thus, one of the very purposes of centralized national planning under these conditions is to break the functional link between increases in national income and consumer demand in order to raise the marginal propensity to save. Or to put it another way, in the predominantly non-market economies of the Soviet type, government demand provides a guaranteed outlet for a wide range and assortment of investment and military goods, so that national product can rise independent of any changes in personal household consumption. Similarly increases in national product need not be reflected in rising levels of consumption. Should there turn out to be a gap - either *ex ante* or *ex post* - between flows of money income and consumer goods availabilities, these can always be bridged through rationing, other direct controls and/or raising prices.

This is not intended to suggest that in practice this works out smoothly, in fact these adjustments are usually characterised by lags, and there are all the usual limitations due to imperfect knowledge, lack of foresight, administrative and other types of frictions, etc.

However, there is one important respect in which even in a Soviet type system the nexus between ΔY and ΔC prevails; that is the one based upon the interrelationships between growing national product and rural-urban population shifts. One of the concomitants of rapid economic growth and industrialization is urbanization. Therefore, to the extent that the resource cost of maintaining a person at a comparable standard of living is higher in the city than in the village⁷⁾, rural-

urban population shifts will be reflected in increases in average per-capita consumption even if urban per-capita consumption levels remain unchanged. In fact, depending upon what the scarcity relationships in the labor market are at any one time, wages and consumption standards may or may not be raised in order to recruit labor for an expanding urban industry. That is, if there are large pools of unemployed and underemployed labor both in the city and the country, the existing rural-urban consumption differential may be sufficient to insure a continuous supply of urban labor over a five to ten-year period. Only as shortages of labor begin to be felt may it become necessary to widen the rural-urban consumption gap so as to attract more labor from the countryside and at the same time also augment the incentives of those workers who are already in the city.

Actually, Mainland China on the eve of its first Five Year Plan was apparently in a position of pronounced urban and rural labor surplus. This combined with the considerations outlined above seems to me to justify the assumption of stable rural and urban per capita consumption in a theoretical growth model intended to apply to a Soviet type economy.

IV

Another problem of considerable importance that has been raised concerns the basic character of the growth model used in *The Prospects*. Of particular significance for general development theory is the question whether Harrod-Domar type dynamic models - essentially built around capital inputs as the strategic variable - are applicable to processes of economic growth in underdeveloped areas. Do not these models leave out of account growth effects due to institutional changes, improvements in the efficiency of organization and management, and to leaps in technology, which are such important aspects of the development process?

7) For an interesting discussion of the national income implications of these rural-urban shifts see Simon Kuznets: *Economic Change*, Ch. 6, New York, 1953

It would seem to me the answer to this set of questions would very much depend upon how the particular model is constructed and what considerations have entered into the choice of parameters. One of the virtues of the Harrod model is precisely its simplicity and high level of generality. Essentially it provides a framework which can easily be modified by fitting additional variables into it. Thus in our case, the model was based on eight parameters: capital-output ratio—aggregate and industrial, share of government consumption in GNP, rate of population growth, ratio between the rate of industrial growth, and the rate of urban population growth, share of industrial investment in the investment total, per capita rural consumption, and rate of growth in per capita urban consumption. Given these constants and the assumption of a one year investment-output lag, national and industrial product, aggregate and industrial investment, rate of urbanization, and level of consumption (rural, urban and governmental) can be derived.

In what way does such a model take into account institutional variables? It certainly does not do so explicitly, but institutional factors play a very important role in the choice of assumptions on which the model is based. For instance, as was shown earlier, the assumption concerning stability of per capita rural and urban consumption is based on an analysis of the nature of the system and the character of planners' preferences. The analysis may not be valid and it may be open to challenge on its own terms, but the problem has not been ignored.

A similar problem arises in connection with organizational and technological improvements. The model is basically built around rising factor inputs rather than increases in productivity and changing production functions. It is actually very doubtful that with the data and the theoretical apparatus at our disposal now, there is any meaningful or operationally relevant method by which organizational and technological changes could be introduced as inputs the growth effects of which could be clearly separated and identified.

Yet this does not mean that they can not be taken into account. On the contrary, they may, for instance, be introduced indirectly through the choice of criteria in terms of which the magnitudes for the capital-output ratios are fixed.

Thus, given the resource and transport constraints under which China's mainland economy operates and the supply inelasticities resulting therefrom, one might *a priori* be justified in using a high capital-output ratio for growth projections. Yet our particular model is based on the assumption that during this initial industrialization decade marked improvements in organization and management will tend to bring the capital-output ratio down to an average level of 3, which in terms of the historical experience of other countries more favorably placed in respect to resource and factor endowments, would appear to be low.

Our model exhibits another characteristic that may bear mention in this context, i. e. the assumed constancy of the capital-output ratio. Obviously, it would be extremely unrealistic to ex-

pect that the ratio will actually be constant during this initial big industrialization spurt. However, this is beside the point. The model was never intended to plot the precise expansion path of Mainland China's economic growth during the period of the first two Five Year Plans. Its purpose was more modest, i. e. to explore: the direction of economic change, the stage of development that was likely to be attained at the *end of the period* on the basis of the stated assumptions, and the character of interrelationships of some of the variables that were considered as most strategic at the aggregative level of analysis. In these terms then the capital-output ratio is viewed as an average over the decade as a whole based on a hypothetical backward look from the vantage point of the end of the model period. In effect then, it is intended as a hypothetical *ex-post* average, which disregards short-run fluctuations around this average - fluctuations that may be quite marked owing to annual changes in the degree of capacity utilization, harvest fluctuations, etc. (April 1957)

エクスタインのコメントを読んで——石 川 滋——

1. アレクサンダー・エクスタイン氏のペーパーは W. W. Rostow (ed.), *The Prospects for Communist China*, 1954 (邦訳、植田捷雄監訳『中共の将来』)におさめられたその旧稿にたいしてその後の情勢や批評をおりこんで若干のコメントを加えたものである。したがってこの旧稿を読まぬ読者には分りにくい点もあるかと思われるから、このコメントに関連する旧稿の主要部分の骨子を紹介するとともに、コメントの内容についても少し補足を加えておきたい。

エクスタイン氏の旧稿の目的は、中国の経済成長に影響を与えそれを制約する重要な諸条件・諸変数を探究し、かつそれら諸変数の相互関係とその帰結を明らかにするために将来にわたる所謂フローのモデルを作製するにあった。ところでこのコメントで問題にされている箇所を3つに括ってみると、(a) 中国の経済開発の目的は生産財と軍需工業品の急速発展に重点をおく工業化に指向され、手段としては包括的経済計画をとるとみる。コメントで屢、「ソ連型経済」といっているのはこの意味であ

る。(b) つぎにかゝる経済開発方式の「もっとも基本的なディレンマ」は農業発展が犠牲にされることだとみた。ディレンマは主として工業化に伴う農産物需給の不均衡から説明される。その想定上の計算では 1952 年より出発して需要は 1957 年に 13%、1962 年に 28% の増加であるのにたいして、供給の方は純技術的にかつ現行農業投資規模で考えて、同期間に 10% および 20% が増加可能な最大限であろう。しかし予定された工業化のためには商品化農作物の一定量の確保が至上命令であるから、需給不均衡は農村の消費水準切下げにより解決されよう。1953 年秋の重要農産物にたいする集荷配給統制はこのような必要によるものだったが、同じ必要によりつづいて農業集団化を余儀なくされよう。「集団化の主要機能は国家がより直接的に農産物を確保しうることだ。」しかし集団化は農業生産にたいして「破壊効果」をもち、生産減退を齎す可能性がある。しかし集荷は予定通り強行され、農民の消費は一層切下げられ、それは更に生産の回復を遅らせる。このような悪循環は