

RESOURCE FLOW BETWEEN AGRICULTURE AND INDUSTRY

— The Chinese Experience*—

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The author has previously been engaged in a series of comparative studies on the role of the agricultural sector among the developing countries, being in doubt about the validity of the generally recognized view that in those countries much of the capital for industrialization has been supplied from this sector. For the purpose of re-examining this view, in this article the author analyses the resource outflow-inflow position of the agricultural sector in the Chinese economy and presents a grave question: Can the agricultural sector provide sufficient capital for industrial development in developing countries?

INTRODUCTION

THE IDEA that in order that economic development in underdeveloped countries should progress successfully it is necessary that the agricultural sector should provide the funds for the non-agricultural sector, specifically, for industrialization, would now appear to be accepted as being practically a matter of common-sense. In the background of this way of thinking there lies the at first sight plausible reasoning that the primitive capital accumulation for the emerging industrial sector can scarcely be looked for outside the agricultural sector, the sector which is of overwhelming importance at the beginning of the development period both in terms of national income and of population. On the other hand, there is also another aspect to this matter, the belief that the arguments put forward by students of the experience of Japan, which undertook a rapid industrialization in the 19th century, and of the Soviet Union, which trod a similar course of rapid heavy industrialization between 1920 and 1930, have provided empirical backing for this kind of reasoning.¹

* I wish to express my appreciation to Professor Simon Kuznets for making comments and criticisms on the original version of the estimates regarding Table 1. I am also grateful to Mr. Yoshio Kawamura of the Institute of Asian Economic Affairs for allowing me to use the revised edition of the book [28], which was most useful in making revisions of the estimates of the net resource flow in this paper. I would like also to thank Dr. J. R. McEwan for the English translation of the manuscript.

¹ For representative views of Japan's experience, see [41] Part IV. In this work it is stated, for example, that in Japan during and since the Meiji period, with the help of the well-known reform of the Land Tax and the Japanese landlord-tenant system "the

For the purposes of elucidating the admissibility or otherwise of this way of thinking I have previously taken up material connected with a few Asian countries, including pre-war Japan, and carried out an elementary comparative study, and have further supplemented this with a theoretical study based on a simple structural model.² The conclusions of these studies are summarized as follows. (1) With the statistics at present available we are not yet in a position to make any definite judgement regarding the contention that accumulation in the farm sector, or a net outflow of resources from it, took place in Japan in the Meiji period. (2) We have reason to believe that the prevailing situation in the developing countries of Asia at present is characterized by an increasing net inflow of capital resources into the farm sector or by a switch from a net outflow to a net inflow, as an accompaniment to the advance of the development process. (3) The chief factors determining such outflow-inflow positions in the developing countries of Asia at present are (a) a high rate of population growth and the precipitation of the resulting surplus labour in the farm sector, (b) high income elasticities for consumption in the farm sector, (c) a relatively high demand for producers' goods from the non-agricultural sector considered necessary for raising per capita production in agriculture, specifically capital goods for basic investment (flood-control, irrigation, etc.), and (d) a high rate of growth required in the industrial sector, etc. The strength of these factors is rooted in the characteristics of the initial conditions restricting the development of the backward countries of Asia at present. (4) Consequently we would seem to be called upon to be prepared to find that a net inflow of capital funds into the agricultural sector may be unavoidable if development is to be successful. At the same time, however, we are called upon to recognize that there is a possibility to repress the increase in net outflow of resources, depending on choice of technology in basic investment projects and choice of organization

Government took away about one-third of the agricultural product on all land by way of the land tax. On the tenant-cultivated land, which had expanded to almost half of the total cultivated area, the landlords collected about half of the agricultural product by way of rent," and "the major part of the funds needed both for agricultural and industrial development were supplied by agriculture." (p. 655)

As regards the Soviet experience, the controversies between the right and left factions over Preobrazhenski's well-known thesis on "socialist primitive accumulation" were in fact concerned with the direction to be taken by this switch in accumulation, but Professor Erlich's view—that it was the theory set out in this work which was put into effect through the Five-Year Plan by the main-stream faction actually in power—is fairly widely accepted in the West at present [14]. Arguments of the latter kind were expanded and applied in the formula for industrialization adopted in China, a country whose overtones are at once characterized as connoting the socialist system held in common with the Soviet Union, particularly as it exists in agriculture, and there is a very large number of writers who consider, like Nove, that in China, too, the collectivization of agriculture was the decisive instrument in "socialist accumulation." ([40] pp. 16-24.)

² This study is set out in [25], Chapter 4.

in the farm sector.

The above comparative studies incorporated part of the results of empirical work which I had previously carried out on resources outflow and inflow in China between 1949 and 1959,³ but in the present article the subject is narrowed down to China and an attempt made to improve and expand the work procedures employed. This will serve the aim of deepening our understanding of points (2) and (3) in the conclusions listed above. For these purposes, in the following we shall at first carry out (i) a statistical re-examination of the resources outflow and inflow between the farm and non-farm sectors, using data which have newly become available, specifically statistical data regarding the levying of agricultural taxes in kind, these taxes constituting an important part of the resources outflow from the farm sector (Sections I and II); (ii) an empirical examination of behaviour patterns in food-consumption in the farm household, which are understood as one of the principal determinants of outflow and inflow of capital resources, and we shall see how the results of this examination fit with the observation made under (i) above. (Section III)

In the study which follows we have used the definitions of concepts and the methodology for statistical estimation of resources outflow and inflow which we employed in the above-mentioned comparative studies. Particular attention must be drawn to the following four points. The first is that "agriculture" in the context of "the transfer of capital funds from agriculture" must have the meaning of "the farm sector" when used in the strict sense. The basic constituent unit in this sector is the farm household in which productive activities—agriculture and subsidiary or part-time work, etc.—are organically combined with the consuming activities of the family unit and we may say that even after these units have been collectivized in the form of Agricultural Producers' Co-operatives (APC) or of People's Communes no complete separation of these activities has been seen, apart from short, exceptional periods. Secondly, we consider the term "capital funds" to refer to basic rights of claim to commodities and services, and we denote them by the term "resources." Thirdly, the net sum of outflow is found as the difference between real imports and exports expressed in terms of certain base-year prices. Besides being subject to influence by the size of the difference between imports and exports at the current prices (of the year in which these imports and exports take place), a difference necessitating financial clearing, the net sum of outgoings is influenced by changes in the terms of trade. In the case of any import surplus in the current prices this relation is expressed in the following equation.⁴

$$\frac{M}{P_m} - \frac{E}{P_e} = \frac{E}{P_m} + \frac{E}{P_e} \left(\frac{P_e}{P_m} - 1 \right)$$

³ This study was first published in Tables 6 and 7 in [23]. It was next published in a revised version treating the particular items as given in [26].

⁴ This is transposed as follows for the case of an export surplus in current price terms.

$$\frac{E}{P_e} - \frac{M}{P_m} = \frac{M-E}{P_e} + \frac{M}{P_m} \left(\frac{P_m}{P_e} - 1 \right)$$

(Where M and E are imports and exports in terms of the prices of the year in question, and P_m and P_e are price index figures for imports and exports.)

The first item on the right of the equation is denoted "the sum of real financial resources inflow," and the second "the sum of resources inflow due to the terms of trade effect." Fourthly, besides imports and exports in the form of commercial transactions, we include in imports and exports government public investment in agriculture (regarded as a farm sector import) and payments of taxes in kind by the farm sector (regarded as a farm sector export).

I. COMMODITY IMPORT-EXPORT ACCOUNT OF THE FARM SECTOR

According to our method, the first step in studying the flow of resources in the farm sector consists in clarifying the sector's import-export account for goods and services in relation to other sectors. In developing countries where the greater part of the farm sector and the commodity transactions routes appertaining thereto are in an as yet unorganized condition the performance of this task is wellnigh impossible unless we can carry out micro-surveys of peasant family budgets in such manner that they will subserve our aims. In the case of China, however, statistics for purchases of the products of agriculture and subsidiaries and for rural retail commodities are compiled on the basis of work reports by various organs in the commercial sector, which has been widely socialized in advance of other sectors, albeit that some questions remain as regards the degree of accuracy of these statistics, and furthermore these statistics are published to a considerable degree. Along with these, statistical estimates for transactions on the non-organized market are published. Hence it is not impossible to estimate for the commodity import-export account of the farm sector on a macro basis, provided that we give careful consideration to the concepts, definitions, and methods of calculation employed in these statistical sources and apply necessary adjustments to them. The results of such an attempt in regard to the period 1950-1959, together with details of the estimation procedures, are exhibited in Table 1.

Before treating of the findings obtained from this estimated account it would seem to be necessary to make a few comments on the nature of the exports and imports and on problems connected with the utilization of the published statistical material.

(1) The exports of the farm sector comprise the products of agriculture and farm subsidiaries.⁵ These exports can be classified into the following three

⁵ The concept of subsidiary farm business differs according to whether the source material is the National Income Statistics, the Farm Economic Survey, or the internal trade statistics. Here they are regarded as including not only products from fishing, hunting, and collecting, but also the products of handicraft industry intended for the market and consisting principally of the processing of raw materials produced by

categories on the basis of the nature of the market involved.

(a) *The payment of the Agricultural Tax in kind.* When paid into the state fiscal organs the greater part of this is at once handed over to the Trade Ministries and its sale is undertaken by State Trading Companies.

(b) *Sales in what may be called "the controlled market."* This corresponds to purchase by State Trading Companies and Supply and Marketing Co-operatives.⁶ A part of the transactions in this market comprises what is officially known as "planned purchase," applied to food grains in November, 1953 and later extended to raw cotton and oilseeds. The amounts delivered by the peasants and by Agricultural Producers' Co-operatives are determined by compulsory quotas laid down under state planning. As we show in the next Section, one of the characteristics of these quotas is that they embrace the greater part of that part of the goods which is capable of being made into marketable commodities (in the case of food grains the "surplus food grains" after deduction of eating-grains, seed, and animal feed). The purchase prices are a controlled price the level of which was determined in line with market prices at the time of the institution of the planned purchase system, but, as we shall see below, they have since been kept practically unchanged. The remainder of the transactions on this market are those of what is known as "unified purchase." As regards the specification of them it should have been the case that purchase contracts were entered into with the producers for the purchase of a certain proportion of total production in each region and in respect to each designated commodity, and that free disposal of the remainder should have been allowed. It is said, however, that since the proportions erred on the high side and price control was strictly enforced these purchases in fact differed little from planned purchase, with the exception of the period of the relaxation of the free market from October, 1956 to August, 1957. Again, the items designated for unified purchase were enlarged from the principal products—pig, tea, hemp, and cocoons—to include a large number of minor local products.⁷

(c) *Sales in the so-called "free market."* A part of the transactions in the market represents the remainder of marketed products after the deduction of the deliveries of designated items subject to planned purchase and unified purchase as above. But the volume of these transactions, as is clear from the above, was limited, and in contrast to the Soviet collective farm market, where transactions in this category were wholly free, there were strict

agriculture. The value of sales of the handicraft products of the farms is given as 8 hundred million *yan* in the Receipt and Expenditure Survey of Farm Household of 1954 (Cf. Table 3). However, it is also reported from the side of production statistics that the production under this head amounted to 2.81 thousand million *yan* in that year. ([27], p. 52n.)

⁶ For a general view of these organizations, see [16], pp. 5-12. This paper is one of the pioneering studies of this subject.

⁷ See [32], especially the statement on p. 89.

limitations governing the places in which transactions might take place, the persons with whom transactions might be undertaken, and the prices at which transactions might take place.⁸ Another part of the transactions taking place in this market represented exchanges in traditional form between farmer and farmer and between farmer and direct consumer in the local markets (the items including, besides "native products" and vegetables, domestic animals and domestic poultry), and this category alone was able to maintain comparative freedom in transactions from first to last.⁹ We may suppose that this has practically the same coverage as what is officially termed "farmers' trade."¹⁰

The relative scale of these three markets can be known in comparative detail only in respect to the two years 1953 and 1954, during which this system was established in substance throughout the nation. We exhibit this in Table 2.¹¹ Since in the "purchases by State Trading Companies and Supply and Marketing Co-operatives (planned and unified purchases)" in Table 1 are included the amounts in fact purchased by these organs in the free market, the original free market is somewhat bigger in scale than there shown. Over the whole, however, this market accounted for a proportion of total marketed agricultural products which was less than one-third, and it might be thought clear that it had declined with the passage of time. Further, the items dealt in became more limited to local products with the passage of time. From the above we may infer that from 1953 the determination of the marketable produce of the farm sector as exhibited in Table 1 was carried out principally in accordance with the planners' preference, or in other words, that peasant behaviour in a free market, of a kind which could be explained in terms of peasant income levels and prices for produce, may be considered to have been subject to marked limitations.

(2) Farm sector imports comprise producers' goods and consumers' goods from manufacturing industry, and agricultural products. From the nature of

⁸ See the various provisions specified in Table 8, Note 6.

⁹ On the chronological changes in the market control for agricultural products and the effects produced on production, there is an excellent account in [42], Chapters III and IV.

¹⁰ "Farmers' trade" refers to the various forms of exchange in the traditional free markets of rural China, but among the definitions in the published literature some consider it to be limited to sales of their products to the direct consumers by the farmers ([11], p. 81 ff. and [19], p. 22. In these two publications it is said that farmers' trade thus defined accounts for 10% of total retail trade in the rural market). To the contrary, other accounts hold that it should also include sales of agricultural and subsidiary products available for sale which are sold to commerce, co-operatives, and other organs ([5], pp. 28, 33).

¹¹ Table 2 is made up on the supposition that the material specified in Notes (c) and (d) are given in line with the (a) series in Table 1. If they are in line with the (b) series the value of supply in Line 2 becomes equivalent to that figure minus the taxes paid in kind in Line 1. See also the narrative in the text under the section (3).

the statistics from which they are derived we may assume that expenditures on consumer goods of a service character in the farm household's budget are not included in them.¹² The imported articles can also be classified according to the nature of the market involved into controlled market articles and free market articles. The "controlled market" is a general appellation applying to purchases from State Trading Companies and Supply and Marketing Co-operatives. As an institution, control exists only in respect to the fixed-quantity distribution system for food grain begun on a provisional basis along with the introduction of the planned purchase system in 1953 and in respect to a number of other items.¹³ In regard to the other import items, however, we may say that their purchase was controlled, in that the total amounts supplied and the breakdown by items were substantially determined by conscious government decisions. The "free market" refers to purchases from joint public and private commercial organs, private commercial organs, industrial and handicraft manufacturers, and farmers, and the transactions coming under the last head are brought together under the "farmers' trade" which we have mentioned above. As regards other transactions in the free market, it is noted that these are of a scale larger than those in the case of free market exports. However, from an early date the greater part of these merchants and industrialists have been under the control of State Trading Companies as regards supplies of raw materials and commodities dealt in. Consequently, we can take it that in the total import market, including the free market, "consumer's sovereignty" is subject to severe limitations. We may say that the fact that since the second half of 1953 there has been a continuing shortage of goods on the Chinese rural market¹⁴ reflects this.

(3) The greatest problem in the utilization of the statistical material employed in making up Table I is the difficulty of judging whether or not the totals for purchases (*ts'ai-kou*) of agricultural and subsidiary products, the

¹² Expenditures on consumption goods of a service character may perhaps account for the greater part of the "other expenditures" in Table 3. Viewed either in terms of cash expenditures or of cash and non-cash expenditures, this occupies approximately 10% of the total. This implies that Table I under-estimates imports roughly by this proportion.

¹³ Return sales of food grains in the farm sector were carried out in respect to the farm households designated as "farm households suffering from food shortage" in the Provisional Regulations for Controlled Purchase and Consumption of Food Grains in Rural Areas of 1955, and those in the area where agricultural production is concentrated on the Economic Crops and Natural Calamity Areas. [56]

¹⁴ According to Wang P'ing, [67], the value of manufactured goods sold in the free market, in the sense of direct retail trade by manufactures and handicraft manufactures, was 7.05 thousand million *yan* in 1953, 5.0 in 1954, 3.56 in 1955, and 4.02 in 1956. These are figures which include sales in the non-agricultural sectors. In the light of these it is clear that the free market imports given in Table I include purchases from joint public and private commerce and from private commerce.

¹⁵ Editorials in the *People's Daily*, Oct. 7, 1953, Nov. 11, 1953, Feb. 8, 1955, and Nov. 12, 1955.

greatest basis in the statistics within the export account, include the Agricultural Tax paid in kind. In the text-book accounts "purchases of agricultural products" are subdivided as follows:

Purchases of agricultural products	{	Concentrated purchases	{ Collection of Agricultural Tax in kind Planned purchases Non-planned purchases
		Non-concentrated purchases	

As the reason for thus including taxes paid in kind along with purchases, the same text-book says, "although these are not originally a part of commercial circulation, they are an important source from which the state concentrates agricultural products, and the agricultural products obtained from the Agricultural Tax are sold through the commercial organs."¹⁶ On occasion, however, there are items in the published statistics which clearly do not include the Agricultural Tax, and arriving at a judgment in each case is altogether troublesome. The sources employed in this Table are a case requiring such a judgment. Table 2, as well as Tables 3 and 4, are of service in checking this, but while Tables 2 and 4 suggest that the figures do not include taxes in kind, Table 3 suggests that they do.¹⁷ We believe that the check provided by Tables 2 and 4 is of greater reliability, but for caution's sake it may be suitable for us to exhibit this as two substitutable series for the case in which the estimated exports do not include taxes paid in kind and the case in which they do. In Table 1 we have put the figures in the sources for purchases of agricultural and subsidiary products by State Trading Companies and Supply and Marketing Co-operatives unchanged in Series I-2, and in the Totals column we have shown an (a) series in which it is assumed that taxes in kind are not included in them and a (b) series in which it is assumed that they are included.

(4) The second problem is the fact that there is a considerable difference between the figures published up to the middle of 1958 as statistics of purchases and those published after that date. In practically all cases the latter are smaller than the former. In the Table the former appear as A series and the latter as B series. Checking them with available material, it appears that the B series represents the results of a correction of the A series on three points.¹⁸ (i) As shown in Table 3, up to 1955 the state trading companies

¹⁶ See [20], pp. 237-238, 121-122.

¹⁷ The checks by means of these Tables, apart from that relating to Table 2, are self-evident. The check by means of Table 2 is carried out by the following procedure. The figures for food supplied in this Table plus sales in the free market are of the same series as the figures in the I-2 series in Table 1, but when converted into terms of kind the figures are equivalent to columns (2)+(3) in the Table. As shown in Note (f), the figures for raw cotton and oilseeds, too, do not produce very irrational results.

¹⁸ Corrections of the A series by the B series are particularly great in the period prior

delegated the greater part of their purchases to the Supply and Marketing Co-operatives, and this might have produced double accounting in the purchase statistics.¹⁹ (ii) The alteration which accompanied the revision of definitions and methods in "retail commodity statistics" as a result of the All China Purchasing Power Conference held in June, 1957, under the auspices of the State Economic Council and the State Statistical Bureau.²⁰ (iii) The value of transactions in the free market had been obtained by estimation, and the procedure was revised. Thus we would expect it to be well for our study to rely wholly on the B series, but the simultaneous use of the A series is made necessary by the fact that many of the related figures are for 1958 and the preceding years. We may expect the same problem to exist in the case of commodity imports, but here B series figures are obtainable only for value of producer goods purchased.²¹

Keeping the results of these considerations in mind, inspection of Table 1 (and of the principal figures therein shown in Figure 1) provides the following observations. Firstly, considerably different observations regarding the commodity import-export balance in the farm sector are possible, depending on which of the two substitutable series is adopted, but taking the aA series, which has the largest value for exports, or the aB series, which we find the most plausible, it is about 1955 that the balance shifted decisively to an import surplus. Further, we have reason for thinking that the trend was for the surplus to be enlarged with the passage of the years. Secondly, judging by the series for the controlled market excluding free market transactions, the series which is weakest in its statistical basis, imports and exports would seem to have followed a course in which they were comparatively near to a

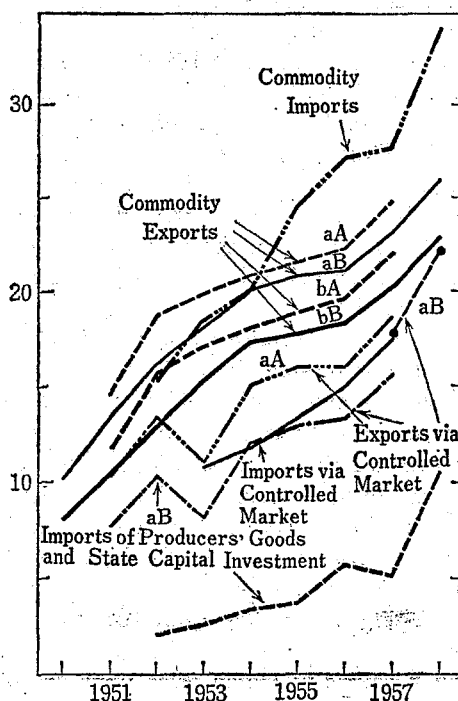
to 1953. As result, the marketed ratio series given in Figure 4 shows a much better fit with that for food grains in the case of the B series.

¹⁹ The source suggesting this is [63], p. 24. Here we find the note, "cleared of reduplications as between state commerce and co-operatives" appended for the first time to a mention of purchases of the products of industry and agriculture by state and co-operative commerce in 1957.

²⁰ In particular see [18]. As one of these reforms, the sales of production goods to the farm sector in the retail statistics, which had formerly excluded production goods in subsidiary farm business, now came to include these. Under farmers' trade it had been the practice to calculate the sales made by farmers' to residents in both town and country, but now this calculation was made for sales to non-agricultural occupations only. Assuming that this latter reform was carried out completely, from the standpoint of Table 1 we would have to deduct the equivalent amount from the import account.

²¹ It is nevertheless true that it is still doubtful whether the purchases of production goods given in series II-1-(i)-(B) in Table 1 are comparable with the A figures in the same series. The A figures are estimated by selecting production goods from the manufactured goods, but the B figures are merely referred to in the original source as "means for agricultural production." The "means for production" are officially defined as including "agricultural raw materials such as cotton." In this instance the sums in question are included in this series only because they approximate to A.

Figure 1. EXPORTS AND IMPORTS OF COMMODITIES BETWEEN THE AGRICULTURAL AND NON-AGRICULTURAL SECTORS
(current prices, thousand million *guan*)



Notes: aA, aB, bA, and bB indicate the alternative series which are derived from Table 1 and explained in the text. Controlled market stands for the total of Lines I-1+I-2 or that of II-1-(1), II-2-(1), and II-3.

Source: From Table 1.

balance, but even in this case the size of the export surplus progressively decreased, and it is more or less clear that it changed to an import surplus in 1958. Thirdly, these statistics make it clear that related to one of the determining factors in this change in the balance between import and export surpluses were the sudden increases in producers goods and government investment in capital construction. Fourthly, this kind of change from an export surplus to an import surplus and the subsequent enlargement of the import surplus may be imagined to have been undesirable in the sight of the planning authorities who from the first had been projecting a rapid enlargement of the industrial sector, but the occurrence would appear to have taken place under conditions in which the planners' preferences were in the ascendant in the determination of the imports and exports of the farm sector.

Among the above observations, to what degree (1) to (3) are relevant depends on the reliability of the statistics used and the appropriateness of the methods employed in their utilization, but in the light of the results of

the investigation of the source material which we have given above we are disposed to think that they are comparatively near the truth. As independent material for checking them we might think of estimating for the financial aspect of the inter-sector balance of payments (the current account element, services, current transfer, and capital account), but as yet we have not succeeded in producing over-all estimates of these.²² On the other hand, we can use for the same purposes the results of the National Survey of Farm Household Receipts and Expenditures carried out for the first time in 1955 in respect to a random sample of more than 16,000 peasant households in 25 Provinces with 1954 as the reference year. The available figures from this survey are presented in Table 4. We have already used this as a partial check on Table 1, and if we compare it with Table 1 in terms of the total frame of imports and exports it would seem to exhibit a fairly good degree of fit. In particular, the value of commodity exports in 1954 shown in it is 18 thousand million *yuan* and that of commodity imports 23 thousand million *yuan*, giving an import surplus of 5 thousand million *yuan*. The value of imports is in excess of that given in Table 1, but the greater part of this difference may be considered to be an error produced by the various assumptions made in the process of estimation employed in Table 1.

II. THE DIRECTION AND SCALE OF NET FLOWS OF RESOURCES

As we said in the Introductory Section, the method employed in our estimation of net flows of resources in the farm sector is that of finding the differences between real imports and exports by revaluing in terms of the prices of a certain base year the values of imports and exports expressed in current prices. What we must emphasize here, however, is that our calculation of the difference between real imports and exports by means of these base year prices has been undertaken only as a convenient means for the estimation of net flows of resources. From the first, the idea that flows of resources might have taken place in directions and on a scale different from those indicated by the commodity export or import surplus expressed in current prices is based on the notion that the current prices in these cases are different from the "real prices" of the imported and exported articles, and that for this reason there may perhaps be some additional flow of resources. By such "real prices" is meant production costs where the allocation of the factors of production among the various products is carried out with most efficiency. Since it is extremely difficult to find for "real prices" in this sense in respect to every year, the aim of this method is to take, as an approximation, the price structure of a year in the past in which the National Economy was in a relatively normal condition (in the case of China the

²² The fragmentary figures are given in [25]. Wage income and receipts of remittances may be supposed to have bulked large among the items serving to defray the import surplus. This is the same as the results in Table 4.

fact of the market mechanism being in operation is at least a part of this condition) and was furthermore more stable, and thereby to cause it to be of use in intertemporal price comparisons. Hence the question dealt with in this Section is that of arriving at approximate values for the difference between real imports and exports, having first selected a base year which would appear to be suitable from this point of view. As a practical question the selection of a suitable base year is a difficult task, but for the purposes of the present study we shall first calculate for 1952 and 1936-37 on common-sense grounds, and thereafter shall try to elicit the significance of the results.

The year 1952 is officially considered to be the year in which the National Economy recovered the highest levels of pre-war economic activity. The first Five-Year Plan began in the following year, 1953, and market strain accompanying rapid investment increases appeared from the second half of that year, but 1952 was a year in which the supply and demand relations in respect to resources were relatively stable. As a result of the completion of the Land Reform and of the movement for the destruction of the pre-existing social order and customary practices in commerce and industry known as the *San-fan* movement the organization of the economy was comparatively modernized. Moves towards socialization, however, were as yet not conspicuous. For such reasons as these it is customary for students of China to consider 1952 the most normal year in the period of the People's Republic of China,²³ and these same reasons provide the grounds for our choice of this year as one of the base years in our study.

The determination of real commodity imports and exports in terms of this base year can be carried out with the estimated data for commodity imports and exports in current prices treated in the previous Section and with data regarding import and export prices which we shall now investigate. The results are exhibited in Table 6.

- 1) The State Statistical Bureau compiled and published an All China Price Index for Purchases of Agricultural and Subsidiary Products and an All China Rural Retail Price Index for Manufactured Goods covering the years 1950-1958.²⁴ There remain some obscure points regarding the compilation of these statistics,²⁵ but if we bear in mind all errors which might arise from these points it will be possible for us to use these statistics as the principal data in arriving at our real values.
- 2) We have reason for supposing that the Price Index for Purchases of

²³ For example, [13], pp. 8-11.

²⁴ The most detailed explanation so far published regarding the purchase price index is to be found in [58].

²⁵ As one of these we may mention the fact that the calculation formula of the index figures is not known. Ideally, the Paasche formula, and for realistic purposes the link method based on the Laspire formula are desired as formulae for the determination of Chinese price indices. (As critical examinations of Chinese price indices the best to date are [37]. It is supposed that these two indices may perhaps be of the Laspire formula or of the link type based on the Laspire formula.

Agricultural and Subsidiary Products may have excluded agricultural products paid as taxes. If we assume that these statistics include these agricultural products paid as taxes (and consequently reflect the changes in the conversion prices employed in the fiscal administration of these products) we will be able to use them directly as comprehensive deflators of the total exports of the B series mentioned in the preceding Section. If, however, we assume that this is not so, then we must reply to the supplementary question of how we are to evaluate in real terms the amount of exports in the A series accounted for by agricultural products paid in taxes. First let us state the main points of the procedure for the monetary evaluation of the Agricultural Tax, as far as we know them.

(a) The sum levied in Agricultural Taxes is evaluated on a unified basis in weight terms of *hsi-liang* (fine grains)²⁶ by the fiscal organs. The most detailed yearly series for the Agricultural Tax which are available to us are also given in "hsi-liang" terms. By "hsi-liang" is meant the processed forms of the principal food grains in each region (rice in south China, millet in north China, kao-liang in the north-east, and wheat in the north-west, the north-west being exceptional in that the figures are for food grains before processing). The greater part of tax payments is made in these standard principal grains, unprocessed.²⁷ The quantities of these unprocessed grains are converted to those of processed grains and the latter are set down unchanged as tax receipts in hsi-liang terms. In cases in which taxes are paid in differing qualities of the principal food grains, or are paid in other food grains, the general rule is to determine the quantities payable by conversion at market prices from the tax-demand expressed in terms of the standard principal food grains. It also sometimes happens that when the government wishes to encourage the payment of taxes in a certain crop the conversion rate is made profitable for that crop. Regarding the conversion rates for payment in cash we have no information, except for the fact that in September, 1950, the regulations in the East China Region called for conversion at market prices.²⁸

²⁶ [28] first edition, pp. 131, 327. There had been a great deal of confusion in the Western literature regarding the interpretation of the term "hsi-liang." In the majority of cases writers have regarded it as meaning rice, wheat, or processed food grains, as opposed to "tsu-liang" (coarse grains) or unprocessed food grains.

²⁷ [28], p. 310, 316-317.

²⁸ The following provisions appear in the Supplementary Provisions to the Provisional Regulation of the Agricultural Tax in the Newly Liberated Areas, issued by the Military Administration Committee of East China in September, 1950. "In the regions in which the cultivation of economic crops is comparatively numerous and in the regions in which there is a shortage of food grains the People's Government in each Province (city or region) may levy agricultural tax in cash as substitute for food grains. As regards the prices for that conversion, where there are the state trading company listed prices the levies will be made calculating in accordance with the listed prices for middle-grade food grains. In regions where there are no listed prices the levies will be made at

(b) Agricultural products delivered as taxes paid in kind are at once handed over by the government financial authorities to the commercial authorities. After the commercial authorities have sold them on the market through State Trading Companies they pay in the proceeds to the state financial authorities. This is known as "the sum of converted public food grains," and is given as a receipt item in the budget along with the portion of taxes paid in cash. The prices at which the financial authorities hand over the products to the commercial authorities are determined by Price Agreement Clauses in contracts concluded in advance between these two authorities. One would expect the unit price for hsi-liang to be specified by these Clauses, but we have no information regarding their content.²⁹

As is clear from the above, "hsi-liang" is a real unit in which the total of Agricultural Tax paid in kind is reckoned in terms of certain price levels of the principal food grains, a kind of "food-grain equivalent." But since the contents of the principal food grains differ from region to region and the raising of conversion rates from other food grains into the principal food grains is employed as an incentive, this food-grain equivalent is only an approximation. A still more decisive question is how this food-grain equivalent is converted into money terms. Following out the above procedure, we can rephrase this question as the question of whether or not there is a differential between the evaluated prices for agricultural products paid as taxes in kind as shown in the budget (equivalent to the prices at which the commercial authorities make their payments to the financial authorities) and the commercial authorities' purchase prices (since we may suppose that these agricultural products paid as taxes in kind would be sold at the same prices as agricultural products subject to planned purchase), and, if there is, how the evaluated prices used in budgeting are determined. The information necessary for investigating this question is presented in Table 5 and Figure 1. From these we learn first that the prices for hsi-liang as used in budgeting were practically constant over the years 1950-1957,³⁰ and second that between 1953 and 1956 the levels of these prices exhibited practically no difference from the annual median figures of the information regarding prices in dispersed local markets collected by Ronald Hsia from newspaper reports. These two facts suggest that there was seemingly practically no differential between the purchase prices and budgetary prices for food grains, at least during the years 1953 to 1956.³¹ Third, for the period

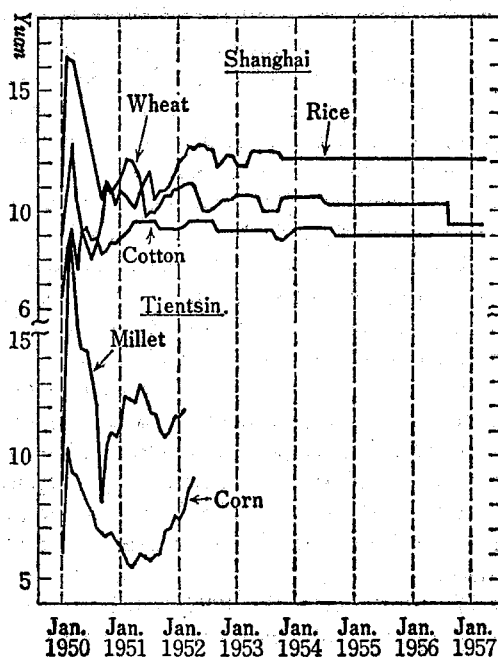
market prices." ([43], Vol. 1, pp. 315-316.)

²⁹ [28], pp. 310-312, 314-315. See also [32], p. 6.

³⁰ The trend seems to be a little inclined to rise. This order of change, however, would be better attributed to fluctuations in the composition of the food grains paid as taxes.

³¹ The same was probably the cases in 1958. The budget price for 100 *chin* of hsi-liang in the taxes levied in 1958, which can be calculated from Li Hsien-nien's report on the state accounts for 1959, is 8.7 *yuan*, the same as for 1957. On the other hand,

Figure 2. MONTHLY CHANGES IN THE WHOLESALE PRICES OF FOOD GRAINS (100 catties) AND COTTON (ginned, 10 catties) IN SHANGHAI AND TIENSIN



Notes: For Shanghai, the prices of wheat and raw cotton from 1955 are the 'taking in by purchase' prices, those of rice and raw cotton for 1950-52 are market prices, and the price of rice from 1955 is the 'controlled consumption price.'

Sources: For Shanghai: [1]; For Tientsin: [38]

of 1953 and before, a fairly conspicuous rise in the purchase price index is clear. Interpreting this at its face value, it implies that the budgetary prices of 1950 were higher than average purchase prices, but this is clearly contradictory to the fact that cash payment of taxes in the East China Region employed market prices in conversion, as stated above. We have reasons for thinking that this apparent contradiction is connected with the fact that the food prices for 1952, the base year of the purchase price index, exhibited violent fluctuations over the whole year, as shown in Figure 2. It may be that these purchases are made in the second half of each year (and consequently at values a good deal lower than annual average values), and that this has fixated the base year prices at a low level. On the other hand, it may be that the hand-over prices between the financial and food Ministries are based on the higher market prices

according to [44], in the six years following the implementation of planned purchase of foods in 1953, that is, up to 1959, the rate of increase in the purchase price was no more than 2.1%.

of an earlier period in the year, and that these have appeared as the budget prices.³² Again, we may imagine that there may have been a fair difference between the items and qualities of food grains covered in the calculation of the purchase price index and those covered by the budget prices, and that the former may have included items with a high rate of price increase. The same is true of the period from 1953. The observations in regard to raw cotton are more or less the same as this. The reason for the prices for raw cotton collected by Hsia being a good deal lower than the budget prices may be that preferential rates had been applied as mentioned above.³³ The conclusions from the above are as follows. For the purposes of arriving at real figures for the amount of taxes paid in kind within exports in the A series the use of time series data for purchase prices by commodities may be considered suitable, although some questions remain as regards the period of 1953 and earlier. But since we cannot obtain data of this kind directly, as approximations it may be permissible for us to suppose constant budget prices, or to adopt the purchase price index converted with the proportion of taxes paid in kind as weight. In the present study we shall adopt the former.

3) For the purposes of arriving at real figures for imports we have used Rural Manufactured Products Retail Price Index for manufactured goods, and the Price Index for Purchase of Agricultural and Subsidiary Products for agricultural products.³⁴

The significance of our choosing the 1936-37 prices as base year prices in the calculation of real imports and exports is that this was the year of peace immediately preceding the war and civil war which lasted from July, 1937, until immediately before the establishment of the People's Republic of China, and it is also based on the supposition that there was a relatively free operation of the market mechanism, including the free pursuit of foreign trade. A wholesale price index linking this year and 1952, together with group indices by stages of processing, has been compiled and published by the Institute of Economic Research, Nank'ai University.

Essential to this index are such questions as the fact that it is a wholesale price index, that it is a simple geometrical average index, and that it is limited to the Tientsin area, while there are also supplementary questions when we come to link it at year 1952 with other indices elicited from the above investigations. In this study, however, we have avoided entering any further into the matter of pre-war base prices, contenting ourselves with outlining the

³² The first provisions for the levying of the Agricultural Tax issued in writing by the central government were published on the 30th of May, 1950, as "Decisions Relating to the Summer Levy of 'Public Food Grains' in the Newly Liberated Areas in 1950."

³³ On the whole the changes in the conversion rate between hsi-liang and raw cotton between 1950 and 1954 run parallel to those in the ratio between the prices of food grains and raw cotton as published by the government in each year.

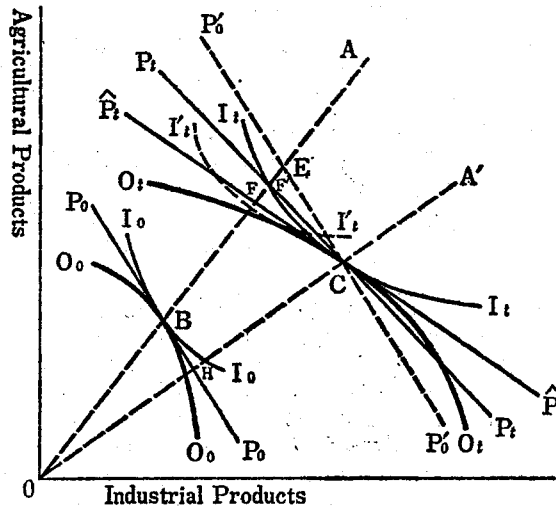
³⁴ The figures for real state investment in capital construction are arrived at by means of the construction costs index for state capital construction works.

broad movements of real imports and exports in terms of pre-war prices with the help of the import and export price indices derived elicited from them. The results of the calculations are included in Table 6.

The findings which can be got from Table 6 are (1) that the real import-export balance calculated in 1952 prices shows a switch from an export surplus to an import surplus from about 1953, at a time earlier than that for imports and exports in current prices, either (a) or (b) series, and that this import surplus increases in successive years and (2) that in the case of the 1936-37 prices an export surplus is more or less maintained throughout, but that the scale of this is later reduced. Compared with the commodity import surplus condition represented in terms of current prices in Table I and Figure 1, this resultant has connexions with the fact that between 1952 and 1957 the terms of trade between agriculture and industry were improved by approximately 10%, but that nevertheless they were still markedly short of recovering the approximately 30% deterioration in terms of trade up to 1952 when considered in terms of pre-war prices. Table 7 is given as showing the operation of this terms of trade effect on the formation of a real commodity import surplus.

In this way the terms of trade effect on real flows of resources differs decisively as between the two series, but which of the two base periods, then, would it be more plausible to adopt? Ultimately, the reply to this is indeterminate, but I think that substantially there is little meaning in attempting to evaluate real transfers of capital resources in terms of pre-war base prices, and that it is more meaningful to do so in terms of 1952 prices. We explain the reasons for this by means of Figure 3.

Figure 3. ILLUSTRATION OF DIFFERING EFFECTS IN TERMS OF TRADE BETWEEN AGRICULTURE AND INDUSTRY



In the Figure, O indicates the production possibility curve for the whole country, I the society's indifference curves with respect to consumption, and P the relative price line. The suffix zero indicates the year 1952, and t 1957. The production possibility curve O_t is drawn in the Figure in a fairly exaggerated form, but we may expect that in comparison with O_0 it should get larger while inclining somewhat towards industrial products. As a result of the introduction of socialization and planning the social indifference curve comes to be determined by the planners' preferences rather than by the consumers', and consequently I_0 transforms to I_t (by P_t we have indicated the case in which consumers' preference remains dominant). Therefore, the production structure is determined at point C , and it is inclined more towards industry than point B , representing 1952 (and also more than point D in the case in which I_t is dominant). Real prices under these conditions will be shown by a price line \hat{P}_t drawn so as to be a tangent to both these two curves I_t and O_t at the point C . If actual prices corresponding to this price line are dominant no real transfer of resources will arise as a result of the terms of trade effect. P_t represents the actually dominant prices, but we do not know whether it occupies this position in relation to \hat{P}_t or not. What is clear to us is that the position of P_t relative to P'_0 (equivalent to P_0) indicates in this way the improvement of the terms of trade of the farm sector. Although we have omitted it here, it is possible for us to redraw the Figure with 1936-37 as the zero year. It will be clear that in such a case P_t will be on the opposite side of P'_0 in comparison with this Figure. We may also suppose that P_0 would not be determined in the manner characteristic of a closed economy, as in this Figure, but would be determined in a manner which strongly reflected international prices.⁸⁵

What we have sought to show by means of this Figure is the following. As we stated at the beginning of this Section, the price line which we should really follow up in this study is \hat{P}_t , but since we have no effective means for arriving at this we have sought an approximation to it by means of P'_0 . This kind of attempt becomes significant only under the conditions where at least, firstly, the shapes of O_0 and O_t are comparatively similar if not identical (this means similarity in available technologies, and not only in resource endowments), and secondly that the determination of P_0 should be carried out in a manner which reflects the shape of O_0 . We may suppose that in such cases \hat{P}_t and P'_0 will be comparatively close. In 1952 prices we represent such as P'_0 . In the case of 1936-37 prices, however, the result is that

⁸⁵ Figure 3 utilizes the chart used in the methodological studies on the inter-temporal comparisons of national income initiated by Richard Moorsteen and elaborated by Abram Bergson in [2], pp. 31-35. Their new discovery was that as methods for the evaluation of national income at two production points B and C there are four sets: OE/OB , OF/OB (OF'/OB), OC/OH , and OC/OJ (OC/OJ'), and that there are differences of appropriateness among them. This kind of index number problem of course exists in our case too, but what we are doing in the present instance is to look for realistic approximations to "real prices" as a question prior to the index number problem.

because of the above two conditions the supposition that \hat{P}_t and \hat{P}'_0 are similar is in itself unrealistic, even assuming that there is a possibility of P_t being closer to P_t than to 1952 prices. An evaluation in terms of 1936-37 prices may be considered to possess a significance similar to evaluations of one country's national income or economic structure with the help of the price structure of another, in that it ignores the cases represented by the curves O_0 and O_t (and by extension those represented by the curves I_0 and I_t). Although it may be significant when looked at from another viewpoint, from the viewpoint of this study it ceases to be meaningful.³⁶

The conclusions of our studies in this Section are summarized as follows: (1) Markedly different results are obtained in the evaluation of the directions and scale of net transfers of real resources, employing either the A or B series, according to whether one takes 1952 or 1936-37 prices as the base. If one takes the former, the net position of real resource flows changes from an export surplus to an import surplus from around 1953, and the scale of this increases in successive years. If one takes the latter, real resource flows show an export surplus throughout, and only its scale is reduced. (2) Which of these results is the more plausible is indeterminate, but bearing in mind the significance of the method of evaluating real transfers in terms of base year prices, the evaluation in terms of 1936-37 prices is seen to be more deficient in theoretical significance.

III. THE MARKETABLE RATIO OF AGRICULTURAL PRODUCTS AND FARM HOUSEHOLD CONSUMPTION BEHAVIOUR

Since the resultant of our statistical investigation, namely that the direction of net transfers of resources between agriculture and industry in China in the period 1950-1959 appears to have changed gradually from an outflow from agriculture to an inflow into agriculture (or, assuming that there was an outflow from agriculture throughout, that its scale was reduced in successive years), will be an observation which is contrary to people's common-sense, it will probably be particularly necessary for us to append an examination of the question of what kind of factors led to the production of these resultants. However, regarding the factors to which particular importance should be attached in the case of China in the light of a general and theoretical examination of the determining factors in net resource transfers, I have already discussed this matter in my previous studies mentioned at the beginning of this article, and I would ask the reader to refer to them.

To summarize them, the theoretical studies were pursued centring on the investigation of the structural equations describing both the relations of

³⁶ The course of seeking to estimate the magnitude of $\angle \hat{P}_t CP_t$ by means of an evaluation of the sum of indirect taxes and subsidies will undoubtedly come to mind as one method for evaluating net transfers of resources. However, whether indirect taxes and subsidies in fact constitute an addition to real costs or are a part of real costs is a matter which can be judged only when we have determined the real price line \hat{P}_t .

supply and demand for the marketed products of the farm sector and the relations of supply and demand for manufactured goods of the non-agricultural sector designed for consumption in the farm sector. As crucial determinants of net resource flows, they drew attention particularly to (1) the population growth rate, (2) the rate of rise in the productivity of labour (measured by the hour) in agriculture, (3) the income elasticities of farmers' consumption, (4) income distribution among the farmers, (5) the marginal fixed capital coefficient in agriculture, and (6) the magnitude of the inducement effect on local investment exercised by centralized investment. Taken up in these studies as providing explanations of the trends in flows of resources in China were the following. Firstly, the high values of (1) and (5) and the low value of (2) (this being under the influence of initial conditions common to developing countries in Asia today) are in operation as the dominant factors promoting an inflow of resources into the farm sector. Secondly, in spite of the operation of certain factors peculiar to China impeding an inflow of resources, namely the tendency for the marginal fixed capital coefficient to fall as an accompaniment to the diffusion of small-scale basic investment projects in connexion with (5) and the increase in inducement effect accompanying the collectivization of agriculture in connexion with (6), they did not succeed in cancelling out the above-mentioned factors possessing counter-effects. The question which we propose to raise here is that of (3), the income elasticity of farm consumption and the related marketable ratio of agricultural products, a question which was not treated sufficiently in previous studies.

Since our way of raising this question is partial, let us first say something about the position occupied by net flows of resources within total determining factors. Firstly, as need hardly be said, the marketable ratio of agricultural products refers to the proportion occupied by that part of the total produce of the farm sector which is market-sold. Grasping the scale of the commercialization of agricultural products from this aspect means, in terms of the most aggregate factor in net resource flows as previously mentioned, raising the question of exports from the farm sector in terms of its supply aspect. We would seem to be called upon to point out as a further implication that in so far as this marketable ratio fails to rise there is a danger of it becoming very difficult for the non-farm sector to exceed the growth rate of the farm sector. This is because at this stage in economic development the development of the non-farm sector is conditioned by the increase in labour-supply, which, in turn, is conditioned by the quantities of food grains³⁷ supplied. In this way the directions and scale of net flows of resources come to be determined by how necessary for the purpose of raising the marketable ratio the products of the non-farm sector are considered, and by what ways these are actually supplied.

Next, the determinants of the marketable ratio (expressed as Ax_t/A_t , where quantity of marketable agricultural products is Ax_t , and total of agricultural

³⁷ Strictly speaking, including food grains used for seed and for animal feeding grains and food grains used for storage.

products A_t) are, in the most simplified case, the quantity consumed per capita in the farm sector (a_t) and production per capita (A_t/N_t , where farm population is N_t). This is expressed as

$$Ax_t/A_t = 1 - a_t/(A_t/N_t) \dots \dots \dots (1)$$

Expressing farm consumption behaviour in relation to agricultural products by the income elasticity (ϕ) and using production per capita as an approximation for per capita income we get

$$a_t = \bar{a} (A_t/N_t)^\phi \dots \dots \dots (2)$$

(where \bar{a} denotes a constant) and if we substitute this in equation (1) we get

$$Ax_t/A_t = 1 - \bar{a} (A_t/N_t)^{\phi-1} \dots \dots \dots (3)$$

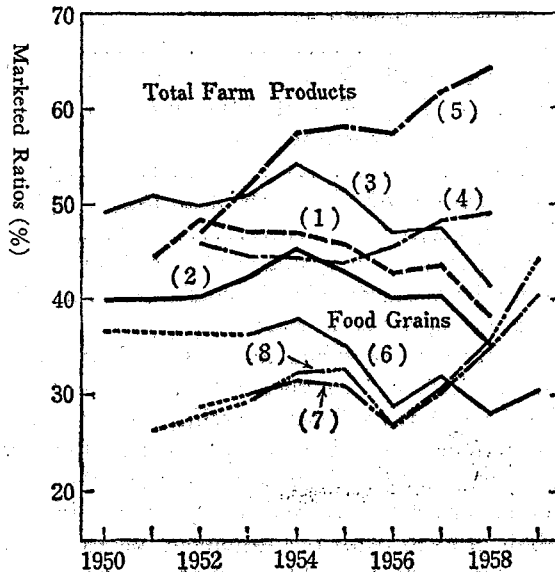
One of the above determinants, a_t , is analyzed into ϕ and a_0 (a certain minimum level of consumption). Since under the conditions of the situation prevailing in China in the planning period in which the determination of consumption of farm household is strongly subordinated to the preferences of the planners it may perhaps be problematical whether or not a farm household's behaviour represented by ϕ will have sufficient significance for it to be taken into consideration. However, it is not right to suppose that the farm household's behaviour is to be completely ignored even in cases where the economy is subject to planners' preferences. We shall carry out the investigation of this point later, and shall proceed with our argument on the basis of equation (2). To these determinants we can add a few more. As is at once apparent, equation (3) takes only income effect into consideration, and does not consider price effect. But in the light of the results of our investigations in Section 2, we may consider it permissible to omit this from our analysis of this period in China. A_t/N_t may be analysed into productivity per labour-hour and the degree of over-population in the farm household. These two factors were selected for special treatment in my previous studies, but here we shall continue our investigation without analysing them in this way. However, it may perhaps be well for us to add something regarding at least one important factor, namely the distribution of incomes in the farm sector, a factor which exerts influence on farm household consumption per capita. In this case, equation (3) becomes

$$Ax_t/A_t = \sum_i \omega_i [1 - \bar{a}_i (A_{ti}/N_{ti})^{\phi_i-1}] \dots \dots \dots (4)$$

In the equation, ω_i indicates the weights of the various strata of the farm household measured in terms of total production.

The analysis of the empirical data in line with these equations must nevertheless face difficulties which are even greater than those confronting our studies in the previous Section. This derives principally from the fact that, as the Chinese authorities also recognize, the official statistics for total agricultural production (A_t) are weakly based. Under the conditions obtaining at the present day, when practically all attempts to arrive at an estimated series for A_t which would take the place of the official statistics can never be anything more than "intellectual guesswork," it may perhaps be more prudent to work from the basis provided by the official figures such

Figure 4. INDICATORS OF THE MARKETED RATIO OF FARM PRODUCTS: MAINLAND CHINA



A. Total Farm Products:

- (1) Value of marketed products in Series b-(A) in Table 1 + Agricultural income in official series.
- (2) Value of marketed products in Series b-(B) in Table 1 + Agricultural income in official series.
- (3) Value of marketed products in Series a-(B) in Table 1 + Agricultural income in official income.
- (4) Value of marketed products in Series b-(A) in Table 1 + Agricultural income in Liu and Yeh estimates.
- (5) Value of marketed products in Series a-(B) in Table 1 + Agricultural income in Liu and Yeh estimates.

B. Food Grains:

- (6) Quantity of marketed food grains in Table 8 + quantity of total food grain production in Table 8.
- (7) Quantity of marketed food grains in Table 8 + quantity of total food grain production estimated by Liu and Yeh.
- (8) Quantity of marketed food grains in Table 8 + quantity of total food grain production estimated by Yuan-li Wu.

Sources: The A-(1)-A-(3) Agricultural income in official series follows [28], pp. 153, 189, and [27], p. 56.

The A-(4) Liu and Yeh series follows [35], pp. 140, 661. The B-(3) Liu and Yeh estimates follows [35], pp. 132, 663. The B-(4) Yuan-li Wu estimates follows [3], p. 86.

Notes: (i) Agricultural income in official series in A-(1)-A-(3) refers to income exclusive of the income accruing from the handicraft production done by the farm households. In contrast, agricultural income in Liu and Yeh series is inclusive of it.

(ii) The values of agricultural income in A are all evaluated in terms of the 1952 prices. The values of marketed products given in Table 1 are in terms of current prices. However, from the discussion in the text related to Table 5, it is evident that the accounting prices of those products paid as the Agricultural Tax in kind are in fact a constant price. Therefore, for computing the marketed ratios of farm products in Series a, the amounts of purchases by State and Co-operative Commerce plus sales in the free market are converted into 1952 prices terms by the use of the official, on-the-farm price index of marketed farm products given in [27], p. 55, as deflator. To the converted amounts are added the amounts of Agricultural Tax paid in kind to derive the total values of marketed farm products in the 1952 prices. With regard to the values of marketed products in Series b, the total values shown are deflated according to the above procedure. (iii) The 1958 values of total marketed products in Series A are derived by assuming that the rate of increase in the values from 1957 to 1958 is equal to that in Series B.

as they are, and to look into the question of the manner in which these figures are distorted by any biases which may be expected to lie concealed in them. In the present study we shall follow this course.

First, in Figure 4 we give annual series for the marketed ratio with total farm sector exports as estimated in Table 1 as dividend, and total net incomes from agricultural production in the official estimates as divisor. [Lines (1), (2), and (3)] In the Figure the marketable rate for food grains, which may be considered to have greater reliability in the figures for the dividend, is also exhibited. [Line (6)] The details of the estimation are given in Table 8. Again, we have produced other marketable ratio series in which the figures of T. C. Liu-K. C. Yeh and of Yuan-li Wu, who have published estimates to replace the official figures, are substituted for the values in the divisor alone (the values in the dividend remaining the same as above), and these are also exhibited in Figure 1. [Lines (7), and (8)]

What the Table conveys to us is : (i) that the official series, with the exception of (1), exhibit similar movements in the case of both total exports and grain exports and that after the beginning of the Five-Year Plan they reach a peak in 1954 and thereafter progressively decline, and (ii) that the Liu-Yeh series exhibit movements which are markedly different from the official series as regards total exports, and in particular the movements are in the opposite direction in 1956-1957 and thereafter. As regards grains, the values are lower than the official series for the period of 1957 and before, and in particular for 1954, while from 1958 movement in the opposite direction is exhibited.

Limiting the matter to the estimation of food grain production (the Liu-Yeh independent estimation of incomes from agricultural production is essentially the revision of the official estimation of agricultural incomes in respect only to the statistics for food grain production) we find one of the causes producing this kind of difference in the following fact. Both Liu-Yeh and Wu consider that the official statistics of 1956-1957 and before are over-estimates of actual output and have corrected them by carrying out a "backward projection" from 1956-1957, of such an order as to produce more or less constant figures

for per capita food grains consumption (per Chinese citizen) from 1952. We, too, recognize that there were over-estimates in the early statistics, but we think that these do not affect the peak reached by the marketed rate in 1954 and subsequent declining trend. Another cause is the deliberate reduction of the official figures for 1958-1959 in the estimates published in both these studies. Over-estimation in these two years is a matter upon which majority opinion is in agreement, but as regards the question of whether the marketable ratio based on corrected figures for these years would be greatly in excess of that for 1954 or not, we are, if anything, of a negative opinion.

In the same way as the grounds for the revision of the statistics undertaken by these authors are conjectural, the observations which we have made above are based on our own conjectures,³⁸ but a more decisive explanation is to be found in the examination of farmers' consumption behaviour which we shall presently undertake. We think that on the basis of it we shall be able to show that after having reached its peak in the planning period in 1954 the marketable ratio declined gently, and that after having again increased in 1959 (this, however, is outside the period dealt with here) it declined once more.³⁹

³⁸ Our position as regards the official statistics of agricultural output is that while we recognize that the reliability of Chinese agricultural statistics is reduced by biases due to the deficiencies in survey methods and the individualistic interests of the reporters, attempts to replace these statistics by certain definite corrected figures must, at present, be limited principally to correcting backwards in time when land unreported with intention to evade taxation is discovered. As an instance connected with such unreported cultivated land, it is known that as a result of the "Investigation-of-fields and Determining-of-output Work" between 1951 and 1952, the only survey of cultivated area and volume of production carried on a national scale, at least before the end of the First Five-Year Plan period, the existence of a large area of "black land" was brought to light. ([28] first edition, p. 286.) Thirty million *mou* of unreported cultivated land was also discovered in the course of agricultural co-operativization, but for statistical purposes this was counted as reclaimed land ([17], p. 22). On the other hand, we can cite the inadequacy of the crop reporting system as the reason for the lack of reliability in the statistics for agricultural production, particularly in the initial period, but there exist no grounds sufficient to support the judgement that this fact produced under-reporting on an organized scale in the initial period. Albeit that this reporting system has been successively improved, in 1957 there were still many provinces which were not even totalling the reports from the outlying villages, and the gaps were being filled with estimated figures. From 1958 random sample surveys were put into effect over the whole country in parallel with the regular reporting system, but the methods employed had many defects. A deficiency in calory levels in comparison with pre-war levels of an order which is scarcely to be believed is cited as a reason for considering the statistics of the initial period to be under-estimates, but whether this deficiency is in fact scarcely to be believed or not is a matter which still requires a full-scale study.

³⁹ The Peking correspondent of the Tokyo *Mainichi* reported a summary of Mao Tse-tung's speech at the Tenth Plenum of the Central Committee of the Chinese Communist Party (originally reported by a wall newspaper). The speech said in part that "we have committed a number of mistakes in 1959 and 1960. ... One of the major mistakes

Next we shall look into the question of what were the factors producing these movements of the marketable ratio, doing so along the lines of equations (1) to (4) and confining our attention, as before, to food grains.

(1) The official data relating to changes in the average ' a_t ' of total farm households are given in Table 9. The question of the over-estimation of A_t in the early period which we mentioned above applies to the estimates such as this which set out from total production, but taking into consideration the figures revealed by the receipt and expenditure surveys of farm households and agricultural production co-operatives we think that it is unlikely for farm household consumption to have been unchanged or to have declined.

(2) It is extremely difficult to evaluate the absolute level of ' a_t ' with reference to the scale of satisfaction of the farm household and an independent study is required for this matter, but in the light of a comparison with the pre-war figures estimated by J. L. Buck and shown in Table 9, the evaluations made by the food administration authorities which we shall discuss below, and the accounts given in official publications regarding rural consumption levels,⁴⁰ we think that it cannot be denied that the food consumption of the 1956-1957 level still remained close to the minimum consumption level.

(3) Regarding A_t/N_t for average of total farm households, even assuming that the rate of increase of A_t is the same as that of total population, it must be expected to show a net increase since the rate of increase of the farm population must be expected to have been lower than that of total population.

(4) It is difficult to estimate values for ϕ so long as reliable series for a_t and A_t/N_t are unobtainable, but we surmise that at least between 1954 and 1957 the value of ϕ may well have been somewhat greater than unity. For the income elasticities of food grains to be greater than unity is extraordinary in the light of the common-sense of international comparisons,⁴¹ and the approximate values of the cross-section obtained from Table 10 by an approximation methods are also less than unity (calculated from series A-7 and A-4), but the decisive grounds for such an estimation are to be found in our qualitative judgement regarding food policy from 1954 onward. The latter also provides an answer to the question of the significance of the behaviouristic equation accompanying ϕ to which we have referred above. As stated above, 1954 is the peak year of the marketable ratio but, as the government itself recognized, the planned purchases in that year were clearly excessive, and the balance remaining after deducting from production the taxes paid in kind and planned purchases was not sufficient to meet the minimum quantities required for holding by the peasantry. By the time the spring of 1955 was reached there were deficiencies in the re-

was regarding the government procurement of food grains. ... The quantities of the procurement were raised, but there were in actuality not as many food grains in the country side as would make possible such procurement." (*The Mainichi*, March 9, 1967.)

⁴⁰ On this subject [57] is the best source.

⁴¹ For India [39], particularly pp. 80-81.

distribution of food grains to farm households suffering from food-shortage. For this reason there were "Give Us Food" disturbances over an extensive area of China in April and May of that year, unrest in the minds of the peasantry being a contributory factor.⁴² On the basis of this experience the government decided on the so-called Three Fixed Policy issued in the order of August, 1955. The points contained in it which are of importance in connexion with the matter in hand are as follows.⁴³

a) The order fixed the amounts of normal-year production, purchases, and food redistribution in respect to all the farm households in the country. The former two amounts were pegged for three years. However, provision was made for the increasing of purchases by up to 40% in areas with abundant harvests in case of the state being unable to maintain a balance in its receipts and disbursements of food grains as a result of the occurrence of natural disasters. The amounts of food to be redistributed were to be fixed annually.

b) In general purchases were to be made in respect to 80-90% of surplus food grains in the possession of farmers having a surplus of food. "Surplus food grains" were defined as meaning confirmed production in the normal year *minus* domestic food requirements (food grains for domestic consumption, feeding of animals, and seed) and taxes paid in kind. The quantities of food grains allocated to domestic consumption and feeding of animals were to be determined in accordance with the "general consumption levels prevailing in each region."

Supplementary purchases in respect to the increase in production accruing under these regulations were carried out with some severity at the end of 1957, and as a result there was some increase in the volume of marketed food grains but basically we may take it that the 1955 decisions ruled throughout.⁴⁴ Further to this, the provisions laid down in April, 1958, direct that during each of the years of the Second Five-Year Plan taxes paid in kind and planned purchases should be stabilized at the levels of the 1957 food year.⁴⁵ It seems that these provisions were virtually abandoned in 1959, but it would appear to be clear that the spirit embodied in these various regulations consisted in a recognition of the fact that under the conditions of the then levels of production and consumption in the farm sector it was advantageous from the point of view of the National Economy, and not merely from the point of view of the producers, to permit the value of ϕ to exceed unity.

(5) While in the above we have been considering average values for

⁴² Editorials in the *People's Daily*, June 18, 1955 and Aug. 29, 1955. See also the Yang Wei-lin report in the *People's Daily*, June 26, 1955.

⁴³ [48], pp. 160-162.

⁴⁴ State Council Supplementary Provisions for Controlled Purchases and Controlled Consumption of Food Grains of October 11, 1957. ([49], Vol. 6, pp. 351-354.)

⁴⁵ Some Provisions of the State Council Regarding the Improvement of the Food Control System of April 11, 1958. ([49], Vol. 7, pp. 281-283.)

the farm sector, Table 10 gives the material relating to the determinants of the marketable ratio in line with equation (4), which takes into consideration changes in incomes or the distribution of wealth within that class. The basic data are derived from the Survey of Farm Households Receipts and Expenditures of 1954, but hypothetical calculations have been included for the preceding period. The marketable ratio declined markedly under the influence of the levelling effect on the distribution of land exercised by the Land Reform. Since that time changes in the distribution of land have continued to occur, although on a small scale. These changes have taken the form of a rise of peasants of the lower stratum into the middle stratum on the one hand, and on the other hand a decline in the average area of cultivated land held by the members of each of these two strata. We may suppose that the levelling of the distribution of land proceeded still further after the collectivization of 1955. This may be expected to have had the effect of lowering the marketable ratio.

As conclusions of the above examination we estimate that two factors which caused a decline in the marketable ratio on the supply side of marketed food grain, and which consequently had a tendency to promote a net outflow of resources from the farm sector, were constantly in operation. We may say that the switch from a real export surplus to a real import surplus during the period of the First-Five Year Plan, or alternatively the gradual decline in the real export surplus, occurred with at least these two factors included among the important factors involved.⁴⁶

IV. CONCLUSIONS AND IMPLICATIONS

Our conclusions from the above examination may be summarized as follows.

(1) Our study is still weak from the point of view of the data employed, but the results of our revisionary work concerning net outflow and inflow of real resources in the Chinese farm sector between 1949 and 1959 still show that the net position is that a change from an export surplus to an import surplus seems to have taken place in response to the expansion of economic development during the period of the First Five-Year Plan, and that it would seem to be characterized by the fact that this import surplus grew over time.

(2) When we look into the movements of the marketed rate of agricultural products, particularly food grains, as one of the aggregate factors influencing such a net resource flow position, we find that if anything they appear to have

⁴⁶ Considered in relation to future prospects, the principal factor, alongside the investigation regarding consumption made in this Section, is the tendency to increased demand for agricultural production goods originating in the non-agricultural sector and required for the raising of agricultural productivity. The influence exerted on net transfers of real resources can be found by inter-industry analysis. This study we shall publish at another opportunity.

been following a declining trend between 1954 and 1957.

(3) We have carried out an examination of the farm household's behaviour in respect to domestic consumption of agricultural products as one of the determinants of the marketed ratio of agricultural products. We have inferred that the income elasticity of the average farm household is extremely high because the present levels of consumption of food grains in the farm household are extremely low and because the distribution of income is being equalized. Government control of commercialization of agricultural products during the period was very far-reaching and powerful, but the government was obliged to give recognition to farm consumption behaviour in line with this income elasticity. There was a danger that if the government repressed this to an excessive degree there would be a decline in the farmer's desire to increase agricultural production and there would eventually be social unrest. 1954, which represented the peak attained by the marketed ratio, was the year in which this kind of situation revealed itself. (It appears that the same situation also arose in 1959 and 1960.) A comprehensive examination of determining factors has not been carried out, but at the beginning of Section III a summary is given of the broad conclusions reached in studies conducted as a preliminary to the investigation of the importance in China of such factors as rate of population increase, rate of rise in the productivity of labour in agriculture, its marginal fixed capital coefficient, and the inducement effect of centralized investment on local investment. Considering these in association with the conclusion given under (3) above, it would appear that these are conformable with the results of statistical examination of outflow and inflow of real capital resources given under (1).

What implications, then, do these conclusions have for the question of the mobilization of development funds for the developing countries in general, and especially for the mobilization of funds for industrialization?

(a) One of the largest features of China in comparison with other countries on the way to development is that in China the market mechanism is much more strongly subject to limitations and that the socialization of the economic unit, including that of the farm household, is advancing more rapidly. Considering this in relation to the subject dealt with in this article, one aspect which is subject to direct influence from these features is the aspect relating to the consumption behaviour of the farm household. Contrary to expectation, however, even under the conditions imposed by this institutional background the government has been unable entirely to negate farmers' behaviour in relation to food consumption, and it has been obliged to maintain the psychological stability of the peasantry and to give recognition to the operation of peasant income elasticity in relation to food consumption within the limits necessary for the maintenance of incentives to increased production. We must look for the basic causes producing such a situation in those initial conditions characteristic of contemporary developing countries, conditions represented by a low level of agricultural production and a low level of peasant consumption. Because of these, it is only with great difficulty that the

restrictions imposed on the marketing of agricultural products can be overcome, notwithstanding the advantages produced by institutional reforms. Conversely, again, it may happen that institutional reform (through its equalizing effect on the distribution of incomes) will strengthen these restrictions.

(b) Among the other principal factors influencing outflow and inflow of capital resources in the farm sector, too, there are included such factors as will promote a net outflow of resources, rather than the reverse, under the conditions of institutional reform. Viewed as a whole, however, the greater part of these promote a net inflow of capital resources under the special initial conditions of economic development common to developing countries at the present day. When we evaluate the resultants which have emerged from the improved statistical studies of resources outflow and inflow in China against the background of this kind of examination of determining factors we are led to think that we should support all the more strongly the opinion that perhaps it may be very difficult to look to the farm sector for the capital funds required for industrialization in the course of the development of the backward countries of the present day.

(c) If we assume that it will be very difficult to depend on the farm sector for the funds required in industrialization, we must answer the question of whence the primitive accumulation funds in the development process in the developing countries at the present day are to be provided. I think that in those developing countries of the present day which were either colonies or semi-colonies in the past the legacy from the colonial period does much to fulfil this function. This includes not only social overhead capital but also directly productive investment (such as Japanese investment in manufacturing and mining in Manchuria). There is no doubt that the wealth of merchants and financiers made available out of the circulatory process also occupies a considerable proportion. However, I wish to leave studies of these questions to the future.

Table 1. AGRICULTURAL SECTOR EXPORTS IN RELATION TO

	1950	1951	1952
I. Commodity Exports			
1. Payment of Agricultural Taxes in Kind	2.20	2.85	3.07
2. Sales of Agricultural and Farm Subsidiary Industry Products to State Commerce and Consumers' Co-operatives	{ (A)	7.68	10.31
	{ (B)		6.48
3. Sales on Free Market	{ (A)	3.96	5.30
	{ (B)		6.49
4. Total { a series (1+2+3) { b series (2+3)	{ (A)	14.49	18.68
	{ (B) 10.20	13.35	16.04
	{ (A)	11.64	15.61
	{ (B) 8.0	10.50	12.97
II. Commodity Imports			
1. Industrial Products Purchased	(A)	9.44	10.47
(1) From State Commerce and Co-operatives		1.34	4.32
(2) From Free Market		8.10	6.15
i) Production Goods Purchased	{ (A)		
	{ (B) 0.73	1.03	1.41
ii) Consumption Goods Purchased	(A)		
2. Agricultural Products Purchased	(A)		4.23
i) State Food Distribution			
ii) Others			
3. State Investment in Capital Construction			0.60
4. Total			15.30

Procedures: I-1 For 1950-1957: Figures are obtained by deducting taxes paid in cash from total agricultural taxes and local supplementary taxes by fiscal (calendar) years as shown in [28], pp. 153, 199. The Agricultural Taxes paid in cash are given in pp. 114 and 168-169 of [28]. The proportion to total Agricultural Tax is assumed to be applicable in the case of the local supplementary taxes also. For 1958: [33], p. 21. The sum of the Agricultural Tax and local supplementary taxes is published as being 37 thousand million *yuan*. The figure in the Table has been calculated by deduction at the rate of payment in kind in respect to Agricultural Tax in 1957, 85%. For 1959: [34]. The sum levied as Agricultural Tax was 3.3 thousand million *yuan*. This is the same as the figure given in the 1959 budget given in [34]. It is assumed that the local taxation budget of 0.44 thousand million *yuan* was similarly the same as in that budget. The figure in the Table is arrived at by multiplying the total of 3.74 thousand million *yuan* by the same coefficient of 85%. As stated in the text, there is a distinction between budgetary and tax-revenue years in the Agricultural Tax accounting, and it is clearly indicated that these figures for 1959 appertain to the former category, but since the level of taxation was stable we have reason to suppose that these figures were the same as those for the tax-revenue year.

I-2-(A) The figures in this series are derived from the figures published by the State Statistical Bureau up to 1958. (The same is the case hereinafter.) The Representative sources are: (a) [58], pp. 4-7, (b) [63] and [64], pp. 24 ff., (c) [67], pp. 28-29. Among these, (a) and (b) give the "total value of agricultural products taken by purchase by Society." Figures for "total value of agricultural products taken by purchase by State Commerce and Co-operative Commerce" can be elicited with the help of a simple assump-

NON-AGRICULTURAL SECTOR AND BREAKDOWN

(in thousand million *yan*)

1953	1954	1955	1956	1957	1953-57 Total	1958	1959
2.80	3.04	3.00	2.68	2.93	14.45	3.15	3.18
8.19	12.10	12.96	13.32	15.62	62.19		
				14.92	58.20	18.8	24.10
8.85	5.96	5.92	6.58	6.28	33.25		
				5.36	30.96	3.96	
19.84	21.10	21.89	22.23	24.83	109.89		
18.12	20.40	20.80	21.08	23.21	103.61	25.91	
17.04	18.06	18.89	19.55	21.90	95.44		
15.32	17.36	17.80	18.40	20.28	89.16	22.76	
12.99	14.76	15.14	17.19	16.82	76.90		
7.37	8.44	9.15	10.12	12.43	47.51		
5.62	6.32	5.99	7.07	4.39	29.39		
2.65	3.00	3.10	4.52	3.96	17.23		
1.92	2.50	2.82	3.70	3.26	14.20	6.68	8.15
10.34	11.76	12.04	12.67	12.86	59.67		
4.70	4.84	8.90	9.20	9.70	37.34		
2.73	3.10	3.27	3.70	3.90	16.70		
1.97	1.74	5.63	5.50	5.80	20.64		
0.77	0.42	0.62	1.19	1.19	4.19	2.63	
18.46	20.02	24.66	27.18	27.71	118.03	34.20	

tion if it is assumed that these transactions take place at the same prices as those of other transactions on the free market. This assumption is not realistic but it is an assumption which is implied when as a practical question we apply the same taking-by-purchase price index to the total value taken by purchase by Society.

I-2-(B) The figures in this series are derived from the figures published by the State Statistical Bureau since 1959. (The same is the case hereinunder.) Representative sources are: (d) [55] and (e) [51]. The figures for 1958 and before in this series are derived from these sources. The figures for 1959 have been extrapolated with the rates of increase over the previous year given in [8], p. 32.

I-3 These figures represented the difference between I-4-(b) and I-2. Among them, source (c) under I-2-(A) provides a check for the 1953-56 figures of the I-3-(b) series in the form of figures for value of agricultural products sold in the free market evaluated in terms of retail prices. These sums (together with purchase and retail price margins) are as follows: In 1953, 9.97 thousand million *yan* (12.7%), in 1954, 7.02 thousand million *yan* (17.8%), in 1955, 6.804 thousand million *yan* (14.9%), and in 1956, 7.499 thousand *yan* (14.0).

I-4 (a) Series. Totals made on the assumption that the value of purchases by State Commerce and Co-operatives under I-2 do not include taxes levied in kind under the Agricultural Tax, I-1. (b) Series. Totals made on the assumption that I-2 represents collected figures including total of I-1. This means that the "total value of agricultural products taken by purchase by Society" in source (a) and the "total value of agricultural and farm subsidiary industry products taken by purchase" in source (d) correspond to this total. II-1~II-2 The sources used in the estimation of these figures are given not in terms of

farm sector but in terms of the rural (nung-ts'un) sector, and in order to make them comparable with the figures in the items under I above, they have all been adjusted to figures for the agricultural sector by using the proportion between agricultural production and rural population. As regarding the determining of this proportion, (1) annual average rural population figures are given in [59], pp. 24-25 and [66], pp. 6-9; (2) figures for "farm population" in 1952 and 1956 are given in [36], pp. 34-41; and (3) from these two we have found the proportions in the two years 1952 and 1957 (94.9% and 93.2%) and have extrapolated by equal difference for the other years.

II-1-(1) and (2) These figures are calculated from sources (a) and (b). They rest on the same assumptions as I-2-(A).

II-1-i-(A), II-1-ii-(A), and II-2. Basically these are derived from the figures given in accordance with the preliminary accounts of the Head Office of the Chinese Consumers' Co-operatives as given in [10]. For the significance of these figures, see [27], pp. 175-180. The points requiring commentary in this connexion are the following: 1) The general framework of the series of figures given here is that of the "value of rural retail commodity trading" within the "total value of retail commodity trading in Society." As stated in the text, it is clear that since 1957 changes have been made in the content of this concept regarding the "farmers' trade" and "production goods for rural areas" and the series used here date from before this time. Consequently, we have specified these as the A series in accordance with the distinction between A and B series as in the section I of the Table, but even so at least one great change in the estimation of "rural retail commodity trading" has been made in the period covered. This Ch'u-Chu series dates from before this change, and as series dating from after the change, we have the series derived from source (a) under I-2-A. Comparing these two sets of value for "rural retail commodity trading" we get the following. (in thousand million *juan*)

	1953	1954	1955	1956	1957
Statistical Research Series			21.61	24.56	24.81
Ch'u-Chu Series	18.38	20.83	25.60	28.27	

In the Table the Ch'u-Chu series has been adopted because of its value in providing a breakdown of the value of retail trading. 2) As regards the "total value of rural retail commodity trading" for other years obtained from the Ch'u-Chu series, we have based ourselves on the following. For 1957 the figure has been arrived at by assuming that the ratio between the Statistical Research series and the Ch'u-Chu series in 1956 as in the preceding paragraph was applicable to 1957. For 1952 we have followed the statement appearing in [11], p. 27 that the rate of increase in value of rural retail commodity trading between 1952 and 1953 was 18.4%. Regarding 1958 it is stated in [30], p. 30 that the value of rural retail commodity trading in 1958 had increased by more than 20% over 1957. This is clearly a (B) series figure, but we have arrived at our figure on the assumption that the ratio is the same as in the A series.

II-1-i-(B) The figures are derived from [55], p. 150 and [29].

II-2-i The figures for "volume of food grains supplied by the State to the rural areas" (in terms of *hsi-liang*, not including beans) for the period from 1953 to 1956 (expected) are given in [57]. On the other hand, it is stated in [44] that the margin between controlled purchase and consumers' price for food in the rural area between 1953 and 1959 remained constant at around 8%. We regard the controlled purchase price as being the same as the conversion price used in fiscal administration. From this we can find the value of total rural redistribution. This is adjusted to apply to the agricultural sector in accordance with procedure given above. For other years we have estimated on the basis of the reported 176.4 thousand million catties (threshed weight) sold to the rural areas over five years as mentioned in final official report on the First Five-Year Plan by the State Statistical Bureau, and on the figures in terms of food years given in the Table.

III-2-ii [27], p. 162.

Table 2. BREAKDOWN OF MARKETED PRODUCTS OF AGRICULTURE AND FARM SUBSIDIARY INDUSTRY PRODUCTS (at Producers' Prices)
(in thousand million yuan)

	1953		1954	
	Actual Figure	Percentage	Actual Figure	Percentage
1. Value of Agricultural Tax Levied in Kind	2.80 ^a	14.1	3.04 ^a	14.4
a. Food Grains	2.54 ^b	12.8	2.80 ^b	13.3
b. Raw Cotton	0.20 ^b	1.0	0.16 ^b	0.8
c. Others	0.06 ^b	0.3	0.08 ^b	0.4
2. Value of Planned Purchase Goods Supplied	5.30 ^c	26.7	7.31 ^c	34.6
a. Food Grains	3.66 ^c	18.4	5.24 ^c	24.8
b. Raw Cotton	1.15 ^f	5.8	1.44 ^f	6.2
c. Oil-bearing Crops	0.49 ^f	2.5	0.63 ^f	3.0
3. Value of Purchases of Goods under Unified Purchase	2.89 ^d	14.6	4.78 ^d	22.7
4. Value of Sales in Free Market	8.85 ^a	44.6	5.96 ^a	28.2
a. Planned Purchase Goods	1.16 ^c	5.8	0.36 ^c	1.7
b. Unified Purchase Goods	7.69 ^d	38.8	5.60 ^d	26.5
c. Other Goods				
5. Total	19.84 ^a	100.0	21.10 ^a	100.0

Remarks: a. From Table 1.

b. Figures calculated from [28], pp. 168-169, 189. It has been assumed that the proportions occupied by each item in the Agricultural Tax and the local supplementary taxes are the same. As the unit price, we have used the accounting prices used in budgeting as shown in Table 5.

c. Figures taken directly from [67].

d. Differences between figures marked "a" and figures marked "c". As a result of a check it has been made clear that the figures given in [67] and [58], have been arrived at by the same estimation procedure.

e. Product of food purchases by State and Co-operative Commerce shown in Table 8 and the accounting prices used in budgeting given in Table 5.

f. Arrived at by proportional division of the balance remaining after deduction of marketed value of food grains from value of planned purchase goods supplied by the gross output ratio for cotton and oil-bearing crops (0.7: 0.3) given in respect to these two years in [35], p. 397. This amounts to assuming that the ratios between value supplied and value produced were the same in these two years. In 1953 this ratio was 50.0% and in 1954, 69.4%, figures which are a good deal lower than those given in [65], p. 13, namely, 74.9% in the 1952 cotton year, 79.8% in the 1953 cotton year, and 73.7% in the 1954 cotton year. We may add that the marketed portions of these two crops are equal to the value supplied with the addition of the value sold in the free market in series 4-a. (Excluding value of food sold. Assuming that the ratio between value supplied and value of sales in free market remained the same over these three years.)

**Table 3. STATE COMMERCE AND SUPPLY AND MARKETING
CO-OPERATIVES' PURCHASE OF FARM AND
SUBSIDIARY PRODUCTS**

	(in million yuan)				
	1952	1953	1954	1955	1956 (total)
A. Total Purchases by Supply and Marketing Co-operatives	3,882	5,629	7,937	n. a.	4,594
1. On Own Account	813	1,385	1,826	1,875	3,037
2. As State Agents	2,887	4,244	6,111	n. a.	1,557
B. Total Purchases by State Commerce	n. a.	n. a.	{7,638 7,362	n. a.	n. a.
1. On Own Account	n. a.	n. a.	{1,527 1,251	n. a.	n. a.
2. Through 'Supply and Marketing Co-operatives'	2,887	4,244	6,111	n. a.	1,557
C. Total Purchase by Co-operatives and State Commerce	n. a.	n. a.	{9,464 9,188	n. a.	n. a.

Note: As for the figures written in parallel in the several columns B and C, since it is written in [15] "State Agency Purchases of 1954 (value of purchases by state commerce) amounted to more than 80% of total state taking in by purchase," the ratios there of are shown into the two cases of 80% and 83%.

Sources: [15], [9], and [50], for each year.

Table 4. CASH INCOME AND EXPENDITURE IN SURVEY OF FARM INCOME AND EXPENDITURE

	1954			1955
	Total Income	Cash Income		Cash Income
	Average Per Household	Average Per Household	All-China Households	Average Per Household
	(<i> yuan</i>)	(<i> yuan</i>)	(thousand million <i> yuan</i>)	(<i> yuan</i>)
A. Income	692.9	263.1	30.9	247.6
1. Agricultural Income	420.6	138.4	16.3	115.4
a. Crop Husbandry	—	96.8	11.7	79.8
b. Animal Husbandry	—	41.6	4.9	35.6
2. Subsidiary Industry Income	172.8	33.4	3.9	24.5
a. Collecting, Fishing, Hunting	—	7.9	0.9	5.8
b. Preliminary Crop Processing and Handicrafts	—	6.7	0.8	7.9
c. Building, Transportation and Commerce	—	18.8	2.2	10.8
3. Other Income (from wages, leases and remittances)	99.5	91.3	10.7	107.7
B. Expenditure	667.7	225.0	26.4	—
1. Expenditure on Production Goods	156.2	55.0	6.5	—
2. Expenditure on Means for Livelihood	454.0	142.5	16.7	—
3. Payment of Taxes	35.4	5.5	0.6	—
4. Others	22.1	22.0	2.6	—

Note: The expansion to all-China households has been arrived at by multiplying the average figures per household by the number of farm households in China in that year, 117.33 million. Since the survey was conducted by random sampling, it may be considered more representative than other all-China surveys. A breakdown of cash expenditure is given only in the case of the portion spent on purchase of commodities, this comprising 27.8% for production goods and 72.2% for means for livelihood. Under "others" are included wages to hired agricultural labour, payments in respect to loans of means for production, duties in cultural services, interest, gifts, and other expenditures. It is assumed that all these expenditures are in cash, and since we calculate the non-agricultural portion of tax payments (paid in cash) at 15.5% in accordance with [28], p. 189, we have included that portion in the account as cash expenditure.

Sources: [60], pp. 31 ff. and [22], pp. 9 ff.

Table 5. BUDGET PRICES AND PURCHASE PRICES OF AGRICULTURAL PRODUCTS

	1950	1951	1952	1953	1954	1955	1956	1957
A. Food Grains								
1. Budget Price Per 100 <i>Chin</i> Hsi-liang (<i>yuan</i>) ¹ (Index, 1950=100)	8.49	8.50	8.50	8.57	8.57	8.52	8.48	8.60
2. Purchase Price Index of Food Grains in the Market Directly in the Hands of the Food Ministry (weighted average: 1950=100) ²	100	100.1	100.1	101.0	101.0	100.4	99.9	101.3
3. Group Index of Food Crops within All-China Agricultural Products Purchases Index (original index with 1952=100 converted to 1950=100) ³	100	117.3	122.7	131.9				
4. Average Government Purchase Prices according to Ronald Hsia (<i>yuan</i>) ⁴			120.7				139.7	
Rice (husked)								
				8.46	8.67	8.33	8.60	
Wheat								
				9.09	9.31	8.94	9.24	
Coarse grains								
				8.46	8.67	8.33	8.60	
B. Raw Cotton (ginned)								
1. Fiscal Conversion Rate for 1 <i>Chin</i> of Raw Cotton to Hsi-liang (<i>chin</i>) ¹	10.33	10.43	10.03	9.06	9.37	8.98	9.56	9.55
2. Budget Price for 100 <i>Chin</i> Raw Cotton ⁵	8.77	8.87	8.53	8.67	8.03	7.65	8.11	8.21
3. Index for Above: 1950=100	100	101.1	97.2	98.8	91.5	87.2	92.5	93.6
4. Technical Crops Group Index within All-China Agricultural Products Purchases Index ³ (original index with 1952=100 converted to 1950=100)	100	111.6					122.5	
5. Average Government Purchase Prices according to Ronald Hsia ⁴			6.24	6.72	6.46	6.67		

Notes and Sources: 1. Calculated from the accounts of the Agricultural Tax in terms of hsi-liang and *yuan* currency given in [28], pp. 153, 189, and from the amount levied on raw cotton expressed in terms of cotton and of hsi-liang in [28], pp. 128, 177.

2. *People's Daily*, March 1, 1954.

3. [27], p. 55.

4. [17], p. 49.

5. Calculated by A-1×B-1.

Table 6. REAL IMPORT-EXPORT BALANCE OF THE FARM SECTOR

	1952	1953	1954	1955	1956	1957
A. Value of Real Imports-Exports at 1952 Prices (thousand million yuan)						
I. Exports:						
1. Agricultural Tax (in kind)	3.07	2.80	3.04	3.00	2.68	2.93
2. Exports via the Market: a. series (A)	15.61	15.48	15.87	16.69	16.77	17.89
b. series (A)	12.54	12.93	13.20	14.04	14.47	15.50
3. Total: a. series (A)	18.68	18.28	18.91	19.69	19.45	20.82
b. series (A)	15.61	15.73	16.24	17.04	17.15	18.43
II. Imports:						
(Purchase Price Index for Products of Agriculture and Subsidiaries)						
1. Manufactured Goods	(100.0)	(110.1)	(113.8)	(113.2)	(116.6)	(122.4)
(Retail Price Index for Rural Manufactured Goods)	10.47	13.19	14.73	14.93	17.12	16.56
2. Agricultural Products	(100.0)	(98.5)	(100.2)	(101.4)	(100.4)	(101.6)
3. State Investment in Capital Construction	4.23	4.26	4.25	7.86	7.89	7.92
(Construction Costs Index for State-Operated Enterprises)	0.60	0.81	0.48	0.75	1.47	1.49
4. Total	(100.0)	(94.6)	(87.0)	(83.0)	(81.0)	(80.0)
III. Value of Import Surplus: a. series	15.30	18.26	19.45	23.54	26.48	25.97
b. series	-3.38	-0.02	0.54	3.85	7.03	5.15
	-0.31	2.53	3.21	6.50	9.33	7.54
B. Real Imports-Exports in terms of 1936-37 Prices (thousand million yuan)						
I. Exports:						
a. series (A)	8.17	8.00	8.28	8.62	8.54	9.18
b. series (A)	6.83	6.87	7.09	7.44	7.51	8.10
(Export Price Index)	(228.6)	(247.9)	(254.9)	(253.8)	(260.3)	(270.5)
II. Imports						
(Import Price Index)	4.62	5.48	5.84	7.16	7.88	7.85
III. Value of Import Surplus: a. series (A)	(331.3)	(336.6)	(342.9)	(344.6)	(344.9)	(353.2)
b. series (A)	-3.55	-2.52	-2.64	-1.46	-0.66	-1.33
	-2.21	-1.39	-1.25	-0.28	0.37	-0.25

Notes: For a general account of the procedures employed in the compilation of this Table, see the text (pp. 14 ff.) Index figures under A from [27], pp. 55, 71. Import price index under B calculated by the following procedures:

1) Index figures are given as below in the annual price

index for wholesale commodities in Tientsin (classified according to degree of processing) with July, 1936 to June 1937 as base period compiled by the Institute of Economics, Nank'ai University. In fact these annual figures for 1952 are averages of the monthly index figures for January-March, but, as shown in the example in Figure 2, these monthly prices are markedly

Table 7. TRANSFERS OF REAL FINANCIAL RESOURCES AND TERMS OF TRADE EFFECT, 1957

	(in thousand million yuan)	
	(A) Base Year 1952	(B) Base Year 1939-37
1. Value of Real Commodity Imports: $M/P_m - E/P_e$		
a series	4.37 (5.15)	-1.33
b series	6.94 (7.54)	-0.25
2. Value of Transfers of Real Financial Resources: $(M-E)/P_m$		
a series	2.43	0.82
b series	4.91	1.64
3. Value of Transfer of Resources due to Terms of Trade Effect: $(E/P_e)(P_e/P_m - 1)$		
a series	2.30	-2.15
b series	2.03	-1.90

Notes: The formula for calculation is given in Section 1. The calculation data are from Tables 1 and 6.

The figures in column (A) have been calculated on the basis of the index figures given in Table 5, note B-(3). The figures in Section 1 of the Table show the results of calculation given in Table 5. As regards the calculation of the value of the real import surplus in Table 6, since it is a synthesis of realized figures employing index figures for each group in the composition of imports and exports, it naturally produces some degree of deviation from the results of calculation given in this Table.

stable and so they are used to represent the whole year. (Index figures converted to New People's yuan)

1. Agricultural products	227.88
2. Other agricultural products	149.98
3. Animal products	224.25
4. Forestry products	518.07
5. Manufacturing industry consumption goods	494.72
6. Manufacturing industry production goods	338.76

2) In order to make up a Paasche type index for farmers' receiving prices and farmers' paying prices with 1952 weights using these figures, we have, in the case of farmers' receiving prices, applied to the above commodity groups the weights 0.80 to group 1, 0.06 to group 2, 0.12 to group 3, and 0.02 to group 4. These weights have been determined bearing in mind the composition weights for total agricultural consumption in [27] p. 50, while including some conjectures. The synthesized index figure for 1952 comes out at 228.56. As regards the index of farmers' paying prices, this has been calculated taking into consideration the composition by months of the value of imports in 1952 as given in Table 1, and applying to the above commodity groups the weights 0.57 to group 5, 0.15 to group 6, and 0.28 to the price index for agricultural products (approximated from the index of farmers' receiving prices). The synthesized index figure comes out at 331.30.

3) We have compiled by the following methods indices for farmers' receiving and paying prices for 1952-57 and have linked them at 1952 with the indices in the preceding paragraph. As regards farmers' receiving prices, we have synthesized the purchase index for agricultural and subsidiary products given under A-I-3 and the price index for agricultural products paid as Agricultural Tax (price unfixed in accordance with the position in the text) with the weight 0.836: 0.164 for 1952. The farmers' paying price index has been synthesized from the retail price index for rural manufactured goods given under A-II-1, the construction costs index given under A-II-3, and the purchase index for agricultural and subsidiary products given under A-I-3 with the weights 0.68, 0.04, and 0.28 for 1952.

Farmers' receiving price index (P_e)	1952	1953	1954	1955	1956	1957
Farmers' paying price index (P_m)	100	108.4	111.5	111.0	113.9	118.3
	100	101.6	103.5	104.0	104.1	106.6

Table 8. MARKETED RATIO OF FOOD GRAINS

	Total Food Production	Agricultural Tax Levied		Sold to State and Co-operative Commerce	
		Absolute Figure (2)	(2)/(1)×100 (3)	Absolute Figure (4)	(4)/(1)×100 (5)
	(1)				
1950	182.0	24.2	13.3	10.1	5.5
1951	197.7	29.6	15.0	20.1	10.2
1952	226.6	32.1	14.2	30.2	13.3
1953	229.2	31.2	13.6	42.7	18.6
1954	240.3	32.0	13.3	61.2	25.5
1955	259.5	32.6	12.6	55.0	21.2
1956	271.5	29.6	10.9	44.0	16.2
1957	275.3	31.2	11.3	56.8	20.6
1953-57 Total	1,275.8	156.6	12.3	259.7	20.4
1958	371.0	37.6	10.1	66.5	17.9
1959	400.8	38.0	9.5	79.4	19.8

Estimation Procedures :

(1) In [28], pp. 128, 177, the value of total food production, including beans, is given in terms of hsi-liang. From this we have found the total food production, excluding soybeans, in terms of hsi-liang, by employing the conversion rate from weighed beans to hsi-liang given in [68], namely 101.5%. The figures for 1958 and 1959 have been calculated using the conversion rate from gross food grains (yüan-liang) to hsi-liang given in [28], namely 72.4%.

(2) In [28], pp. 114, 168-169, figures for the amount of Agricultural Tax levied in food grains (in hsi-liang terms) are given for 1950 to 1957. Since these do not include local supplementary taxes we have used the data regarding total local supplementary taxes given in [28], pp. 153, 189, and have expanded the figures to include local supplementary taxes, assuming that the proportion of these taxes levied in food grains was the same as in the case of the Agricultural Tax. The figures for 1958 have been estimated on the basis of the statement in [33], p. 21, that in 1958 the Agricultural Tax and local supplementary taxes amounted to 3.7 thousand million *yan*. For the purposes of estimation we have assumed that the proportion of Agricultural Tax and supplementary taxes levied in food grains was 84.55%, the average for the period of the First Five-Year Plan, and that the budgeted unit price per 100 *chin* of hsi-liang was 8.542 *yan*, the average for the period of the First Five-Year Plan. The figure obtained, 37.6 thousand million *chin*, represents an increase of 20.5% over 1957, and is a good deal more than expected 4.5% mentioned in [31], p. 6. For 1959 it is stated in [34] that the income from the Agricultural Tax was 3.3 thousand million *yan*. This is the same as the figure given in [33]. We assume that the budgeted local supplementary taxes were also the same, at 0.44 thousand million *yan*. We convert the total of 3.74 thousand million *yan* into the quantity of food grains levied in payment of taxes (in terms of hsi-liang) by the same procedure as above.

(4) For 1953-1955: We have subtracted the figures in column 2) from the total value of food grains levied as taxes or taken in by purchase by the State (73.9 thousand million *yan* in 1953, 93.2 in 1954, and 87.6 in 1955) in hsi-liang terms (excluding beans) as given in [57]. For 1950-1952: [54], p. 161 and [12], p. 31 give the following index figures, respectively. (The methods employed in the calculation of these food grains are not specified,

AND BREAKDOWN

(in billion catties of hsi-liang)

Sold in Free Market		Total Marketed Food Grains		Official Figure of Marketed Ratio of Food Grains		
Absolute Figure (6)	(6)/(1)×100 (7)	Absolute Figure (8)	(8)/(1)×100 (9)	Hui Ling (10)	Ch'u Ch'ing (11)	TCKT (12)
32.5	17.9	66.8	36.7	18.7*		
				20.4*		
				18.1*	23.4	
16.2	7.1	90.1	39.3	25.0*	25.2	29.1*
4.6	1.9	97.8	40.7	26.0*	30.8	31.0*
4.9	1.9	92.5	35.6		26.7	27.1*
12.2	4.5	85.8	31.6			25.1*
—	—	88.0	32.0			
37.8	3.0	454.2	35.6			
—	—	104.1	28.1			
7.6	1.9	125.0	31.2			

but it is assumed that they are the same as used in the Table.)

	1950	1951	1952	1953
Total volume of food grains purchased by the State	100	200	350.32	424.4
Total volume of food grains levied as taxes or purchased by the State	100	131.04	167.16	

Of these the former makes it possible for us to arrive at the figures given in the Table by using the above-cited figures for 1953. (In [50] for 1953, the value of total purchases in 1953 is given as 29% over 1952, which differs from the increase of 21.44% at which we arrived from the above-cited series, but in the present case we adopt the latter figure.) Extrapolating by the latter series the figure of 34.3 thousand million *chin* levied and purchased in 1950 obtained by adding column 2) in the Table to the volume of food grains purchased in 1952, we get 45.0 thousand million *chin* for 1951 and 57.3 for 1952, respectively 10.3% and 8.0% more than the total of columns 2) and 3) in the Table, namely 49.6 thousand million *chin* in 1951 and 62.3 in 1952. For 1956: We have adopted the statement in [50], for 1956, "Since in 1956 the State lightened the farmers' duties in regard to the levying and taking in by purchase of food grains, the volume of food grains levied or taken in purchase declined by 16% from the previous year." (The total value for that year thus becomes 73.6 thousand million *chin*.) For 1957: We have found the difference between column 2) and the figure of 88.0 thousand million *chin* given in the statement in the editorial in the *People's Daily* of the 27th of September, 1958: "The government has already decided that in spite of the greatly increased production of food in this year it will maintain unchanged the level of 88.0 thousand million *chin* levied or taken in by purchase during last year." For 1958: We can work out the figures directly because it is stated in [52], p. 11, that the value of food grains purchased by the State and Co-operative Commerce in that year was 17% over the previous year. For 1959: We have adopted the statement in [21], p. 28 that State purchases of food in that year were 19.4% more than in the previous year.

(6) For 1950: We have adopted the figure of 66.8 thousand million *chin* for food levied or taken in by purchase in 1950 as given in [55], p. 149, and have arrived at our figures

by subtracting from it the figures columns 2) and 4) in the Table. This source contains no specific information as to the scope of food grains covered, the units employed, etc., but since the figure of 105.92 thousand million *chin* for 1958 given in the same column is similar to the sum of columns 2) and 4) in the Table, 104.1 thousand million *chin*, we have assumed that the scope of food grains covered, units employed, etc., are the same as in the Table. [44] states that approximately half of the value of food grains taken in by purchase in 1950 was undertaken by private-enterprise food merchants and processing factories. This sum is stated to have been two-thirds of the value of national retail trading and 73.8% of total priced value of foods processed, and we may be justified in assuming that it includes the value of food grains levied in taxes. Making this assumption, the volume of sales in the free market as shown in the Table occupies 48.7% of the total volume of commercialized food grains, and more or less fitted with the figure in [44]. Figures for 1953 and 1954 have been calculated on the assumption that the proportion of sales to the free market within the value of food grains, raw cotton, and oil crops levied as taxes and sold in these two years (18.0% for 1953 and 47% for 1954) can be applied to food grains. The figures for 1954 and thereafter are entirely estimates, arrived at bearing in mind the following changes in the food control system as well as the movement in total sales of food grains in the free market shown in Table 1.

a) In "Provisional Measures for Food Market Administration of January, 1953" [47] it is laid down that peasants may dispose of the surplus of food grains remaining to them after payment of taxes and planned purchases by 1) using it freely, 2) storing it, 3) selling it to State or Co-operative Commerce or putting it on the State food market, or 4) using it in the rural areas in small-quantity exchanges for the purposes of equalizing local surpluses and scarcities. The State food markets are operated under State supervision, and those who are allowed to buy in these markets are the inhabitants of towns and cities, and such of the hotels, restaurants and processing firms in the small towns and cities as have been granted permission. The trading coming under 3) and 4) in the above is represented in the Table as the free market transactions in 1954 and 1955.

b) No changes in a) above are added in [48].

c) The "Directive on the Question of Relaxing the Administration of the Rural Market of October, 1956" [45] originally prescribed the freeing of the market for material goods other than those subject to "planned taking in by purchase" and "unified taking in by purchase," but it is believed that in fact material goods appertaining to "planned taking in by purchase" came into the free market. (See the preamble to the Provisions in the following item.) The degree to which this took place is not known, but here it is taken as being half of the marketed ratio on the free market in the years 1953 and 1955.

d) In "Provisions Disallowing the Entry to the Free Market of Agricultural Products and Other Material Goods Subject of State Planned Purchase and Unified Purchase of August, 1957" [46], the selling of food in the market was forbidden, and it could be sold only at the shops for taking in by purchase designated by the State. In those regions where the supply-and-demand situation had eased State food markets might be set up under the Provincial administrations, but this was not general.

e) Food transactions in the "markets" reopened under the Directive [4] of the Central Committee of the Chinese Communist Party and the State Council may be regarded as similar to these transactions in the former State food markets.

(8) Total of columns 2), 4), and 6).

(10) [65]. The asterisk indicates that the figures are in terms of food years.

(11) [11].

(12) [61].

Table 9. QUANTITIES OF FOOD GRAINS AVAILABLE FOR PER CAPITA FARM AND NON-FARM POPULATION

	State Statistical Bureau's Data ¹				J. L. Buck's Study ²	
	1953-54	1954-55	1955-56	1956-57	Average for the Four Years	
1. Production (unprocessed) (MMT)	166.75	175.78	183.86	192.72	179.78	163.2 181.9
2. Reduction Factor for Processing (3)/(1)	0.855	0.827	0.861	0.861	0.851	0.805 0.801
3. Production (processed) (MMT)	142.53	145.43	158.36	165.89	153.05	131.3 145.1
4. Total Quantity Available for Food Grains (MMT)	111.60	114.12	126.80	138.89	122.35	111.2 124.0
5. Factor for Food Use (4)/(1)	0.669	0.649	0.690	0.721	0.681	0.845 0.855
6. Quantity Available for Rural Population (MMT)	93.09	95.71	107.36	117.58	103.44	91.6 104.3
7. Numbers of Rural Population (millions)	499.1	509.1	520.7	527.6	514.13	477.4 473.6
8. Quantity Available for Per Capita Rural Population (kg.)	186.5 (260) ³	188.0 (266.5) ³	206.2 (279) ³	222.9 (296.5) ³	201.19	192.0 220.2
9. Quantity Available for Per Capita Farm Population	(187) ⁴	(199) ⁴	(193) ⁵	(198) ⁵		
10. Quantity Available for Urban Population (MMT)	18.51	18.45	19.47	21.27	19.43	19.6 19.7
11. Numbers of Urban Population (millions)	76.1	79.9	81.2	87.5	81.18	119.4 118.4
12. Quantity Available for Per Capita Urban Population (kg.)	243.4	230.9	239.7	243.0	239.3	161.9 167.8

Notes: The figures under 3) are on an unprocessed food grains base. Besides food for human consumption, includes seed and animal feed. We may note that the figures given for 1952-53 are 262 kg. and for 1949 approximately 200 kg.

Sources: 1. [61], pp. 28, 31. 2. [3], pp. 71-72, 68-70. 3. [6], p. 10. 4. [24], [60]. 5. [53]. 6. [62].

Table 10. CHANGES IN MARKETED RATIO OF FOOD GRAINS DUE TO CHANGES IN INCOME DISTRIBUTION

	Members of Co-operatives	Poor Peasants, Labourers	Middle Peasants	Rich Peasants	Former Landlords	Total or Average
A. 1954						
1. Proportion of Agricultural Population (%)	4.2	29.0	62.2	2.1	2.5	100.0
2. Average Cultivated Land Per Capita (<i>mou</i>)	3.17	2.68	3.54	5.03	3.05	3.29
3. Proportion of Total Cultivated Area (%)	4.1	23.6	66.8	3.2	2.3	100.0
4. Average Food Consumption Per Capita (<i>chin</i>)	391	353	378	413	361	373
5. Food Marketed Ratio (%)	30.0	22.1	25.2	43.1	28.1	25.7 (25.3)
6. Marketed Food Grains as Proportion of Total (%)	4.2 (4.9) (466.4)	18.2 (20.6) (272.6)	67.2 (65.6) (479.7)	8.2 (5.3) (960.6)	2.0 (2.6) (286.0)	100.0 (420.6)
B. (Agricultural Income Per Capita) (<i>yuan</i>)						
On Consumption of Land Reform						
1. Proportion of Agricultural Population (%)						
2. Average Cultivated Land Per Capita (<i>mou</i>)						
3. Proportion of Total Cultivated Area						
4. Total Marketed Ratio Assuming Rates for Each Stratum Were the Same as in 1954 (%)		57.6	35.7	3.6	2.6	100.0
5. Marketed Food Grains as Proportion of Total, on Same Assumption as Above (%)		2.97	3.80	4.05	2.88	3.30
		52.2	41.1	4.4	2.3	100.0
C. Before Land Reform						
1. Proportion of Total Cultivated Land		46.6	43.2	7.7	2.6	100
2. Total Marketed Ratio, on Same Assumption as B-4 (%)		17	25	18	40	100 (35.3)
3. Marketed Food Grains as Proportion of Total, on Same Assumption as Above (%)		10.6	17.8	22.0	49.6	100

Notes: The division into strata in the Table is in terms of that classification which is peculiar to China, and does not necessarily correspond to incomes or the distribution of wealth. As regards the figures in brackets given under A-6, the proportion of marketed food grains as calculated from A-2 and A-5 on the assumption that food production per unit of cultivated area is constant, and the proportion of total food grains market in such a case, are given under A-4. For B-1 and B-2. In the original source "others" is given under the strata classification. C-1 is the same. This includes those who let out small pieces of land to tenants, farmers who also act as petty traders and handicraft manufacturers, and the like. However, their weight is markedly small, and they have been omitted from the calculation in order to preserve comparability with 1954. For B-2. In the original source these are given as per farmer, but we have arrived at our figures on the assumption that the population per farm household at the time of the completion of the Land Reform was the same as in 1954. For B-4, and B-5. Arrived at under same assumptions as A-6. For C-1. Average general figures for the Central South Region and South West Region as given in [28] (first edition), pp. 118-120. Consequently the calculations based on this and given under C-2 and C-3 are hypothetical values. For C-2 and C-3. Arrived at under the same assumptions as A-6. Source: [60] except where specified in the notes.

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ABBREVIATIONS: *CCYC*=*Ching-chi Yen-chiu* (Economic Research). *CHCC*=*Chi-hua Ching-chi* (Planned Economy). *CHTC*=*Chi-hua yü T'ung-chi* (Planning and Statistics). *HHPYK*=*Hsin-hua Pan-yüeh-k'an* (New China Semimonthly). *HHYP*=*Hsin-hua Yüeh-pao* (New China Monthly). *TCKT*=*T'ung-chi Kung-tso* (Statistical Activities). *CHYC*=*T'ung-chi Yen-chiu* (Statistical Research).

NOTE

The equation in the Ishikawa article on page 5

should read

$$\frac{M}{P_m} - \frac{E}{P_e} = \frac{M-E}{P_m} + \frac{E}{P_e} \left(\frac{P_e}{P_m} - 1 \right)$$

Again, another equation on the same page, in

Foot-note 4, should read

$$\frac{E}{P_e} - \frac{M}{P_m} = \frac{E-M}{P_e} + \frac{M}{P_m} \left(\frac{P_m}{P_e} - 1 \right)$$