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INCOME ACCOUNTING TO GUIDE PRODUCTION AND WELFARE POLICIES

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American agricultural policy has shifted its center of gravity during the war from production adjustments to prices, with parity the cornerstone on which all else rests. The Land Grant Colleges and Universities in their report on Postwar Agricultural Policy[1] avoided any discussion of parity despite the fact that national farm legislation has keyed both farm prices and income to a legal parity. It is folly to bypass parity. Parity as an idea has great merit; it appeals to the public as fair and just. Parity as formulated by law cannot be defended either on economic or social grounds. This legal parity has become a major liability in American agricultural policy: It determines the loan rates of "basic" farm commodities, overvaluating decidedly cotton and wheat, as well as other farm products; it determines the level of support prices of farm products and the government is committed to continue the level of support prices at 90 percent of parity for at least two years after the war. Accordingly, what is likely to happen is that the relative prices of farm products essentially appropriate to wartime will be carried forward in considerable part, into the transition and peacetime economy. Parity also drives a wedge between America's internal and external prices of the leading farm products that enter export trade; and as a result, we are drifting toward a two-price system, export dumping, and commodity agreements. As a consequence of this development, sooner or later, it may be expected that farmers who grow cotton and wheat will acquire a vested interest in measures that are inimical to a liberal trade policy.[2]

The broad arch of American agricultural policy should rest on two columns—*production* and *welfare*, and parity should be reformulated and, if properly done, could become the keystone of this policy edifice. In production, the purpose should be that of achieving economy in the use of resources, the aim being allocative efficiency; in welfare, the focus should be upon a better distribution of income among persons in order to achieve greater social efficiency. Production geared to allocative efficiency, and welfare meshed into social efficiency have become two of the principal objectives of our political economy. They are more basic than any list of crops or of livestock products, more comprehensible and concrete than

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[1] Cf. the present writer's "Postwar Agricultural Policy: A Review of the Land Grant Colleges Report," *Journal of Land and Public Utility Economics*, May, 1945.

[2] At the time the House of Representatives (on May 26, 1945) passed the extension of the Trade Agreements Program, Congressman Pace from Georgia offered an amendment seeking to safeguard the support prices in agriculture. For a fuller treatment of the serious inconsistency between agricultural policy and trade policy and its broader implications see the present writer's "Which Way Will Farmers Turn," *Foreign Affairs*, July, 1945.

either capitalism or socialsim, and certainly more meaningful than the popular slogans associated with free enterprise or 60 million jobs.

Agricultural production and the welfare of farm people are indeed fundamental matters of public concern. They are the pillars on which public policy affecting agriculture should be built. The main issues affecting policies to improve production and welfare are nevertheless far from settled.

In the belief that it is not only possible, but very necessary, to reconsider our price and income policies, and especially to reformulate the parity concept so that it will be meaningful and useful not only in economic analysis but primarily in guiding policy-making, I shall examine the role of income and income accounting for agriculture.

In this paper I shall do two things: (1) propose the outlines of a double system of income accounting for agriculture designed to guide production and welfare policies; and (2) indicate briefly some of the uses of such income accounting for shaping and appraising agricultural policy.

Two types of parity will emerge, a parity for production and another parity for welfare. Each will have general standing, for the theory on which the two concepts and the income accounting procedures are based, are as applicable and valid when applied to industry or any other sector of the economy as to agriculture.

I.

Income performs two basic functions in the social economy, each has its purpose in policy, its underlying principles in analytical work, and its programs in public action. Each of these functions can be put quite simply:

(1) *As incentives to resource owners* income affects the use to which resources are put in production; and

(2) *As purchasing power in the hands of families* income affects the well being of people.

This functional dichotomy is significant because it has its foundation in the primary values that motivate a modern society. There is the desire to economize, to be efficient in the use of scarce resources—an organizing and coordinating value; and there is also the desire to enhance the social efficiency of a people. One of these functions is oriented towards production, the other towards welfare. The two are, of course, inter-connected; but this fact has been stressed to the exclusion of the basic differences in purposes and in administrative techniques required to attain the respective objectives. Economists have been all too prone to restrict their analyses to the first of these two functions, that of economy in the use of resources and the attendant distribution of income to factors, although increasingly society has been unwilling to let income rest at that point. The rapid extension of progressive income taxation, social security benefits, public financing of education, highways, nutrition, housing, medical services, and facilities for recreation are all evidence of this growing public concern about

the personal distribution of income including benefits provided on public account.

The inference is plain: it is not enough to examine production, price, and income solely from the point of view of *allocative efficiency;* income must also be studied as a means in the attainment of *social efficiency.*

To see the mainsprings of this matter in a larger political context, we must take cognizance of the fact that a democratic-state is under obligations to improve (1) the allocative efficiency of the economy—this we have called the *resource problem,* and (2) the social efficiency of the people served by the economy—this we have referred to as the *income problem.*[3]

In agriculture, unfortunately, there is as yet no clear realization of the distinctive features of these two problems. Parity prices and parity income based on historical relationships as now formulated and defined by law have led many people into a blind alley. That road does not lead to either allocative or social efficiency but to mallocations and waste. What is more, the two problems have been badly mixed in policy-making for agriculture. Confusion both as to ends and means has been the result. It is high time that we ask ourselves the crucial question: What is it that we want to achieve? If it is a better use of resources then let us choose means to serve that end. If it is to provide a larger measure of welfare then let us select measures that are appropriate to that purpose. As far as I know there has never been a serious attempt to look at policies systematically from the point of view of purpose in this context. One of the reasons for this failure has been the fact that we haven't had any measurements of the accomplishments of alternative policies and the attendant programs.

Income accounting as here viewed should be devised to provide tools and information to help resolve both the resource problem and the income problem. To do this it will be necessary, however, to develop two separate income accounts.

Income Accounting for Allocative Efficiency

An ideal accounting system should tell us whether it would be possible to increase the total output by changing the use to which any resource is put. In applying this principle to agriculture the alternative uses of resources appear to fall into three broad classes: (1) within farms, (2) among farms, (3) between agriculture and the rest of the economy.

The principal economic concepts and theory that are required for developing statistics designed to measure income as incentives to resource owners are well known and fairly straightforward. The following major steps would be necessary:

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[3] Cf. the present writer, "Economic Effects of Agricultural Programs," *American Economic Review,* Feb., 1941; *Redirecting Farm Policy,* Macmillan, 1943. Also, D. Gale Johnson, "Contribution of Price Policy to the Income and Resource Problems in Agriculture," *Journal of Farm Economics,* Nov., 1944; and in manuscript, *Forward Prices for Agriculture,* to be published by the University of Chicago Press.

(1) Ascertain the amount of income "produced" in agriculture,
(2) Allocate this income to each resource in accordance with its value productivity,
(3) Calculate the rate of return realized by each resource, and
(4) Compare the rates of return (a) within farms, (b) among farms, and (c) between farms and the rest of the economy.

The significant data in all of this, concerning the allocative efficiency with regard to resources, are the rates of return. Comparisons of the rates of return would give us an indicator, a parity[4] that would be meaningful as a guide in policies designed to improve agricultural production. To illustrate, if the rate of return for human agents in farming is less than in other sectors of the economy, a *disparity* is deemed to exist (caused presumably by a malallocation of resources). It follows from this that the total output of the nation could be increased by the movement of labor resources out of agriculture into other occupations, in sufficient numbers to equalize the rate of returns for comparable labor inputs. If at the same time the rate of return for workers engaged in farming is higher in the Western States than in the Cotton Belt, a *disparity* exists (AR/ER is less than unity) among farms (in this case by regions). Here again a gain in national production may be achieved by labor moving out of the South into the West (and into non-agricultural occupations at the same time) until the rates of return are equalized.

This procedure of testing and determining the proper allocation of resources is, of course, also applicable to the production within farms (and fully as valid when applied to non-agricultural production). This "within farms" has been the sphere to which farm management studies have been devoted. We must also compare the rates of return for various capital forms such as land, buildings, fences, machinery, equipment and fertilizer, relative to the market rate for capital. The test is as valid here as it is in the case of labor resources.

The basic purpose of income accounting in this context should be clear and unmistakable: it is to measure the rate of return of each of the various resources employed. The task as here outlined is no easy one; it presents many very difficult problems of a statistical nature. Yet it can be done, at least by stages, from very rough approximations to more refined and dependable estimates as data and methods are forged.

We know even now from the essentially unplanned and unorganized statistics and from direct observations that the rates of returns for comparable resources are far from equal among farms in the same type-of-farming areas, among farms by regions, and between agriculture and the rest of the economy.[5] Any inequalities in the rates of return is a true

[4] When $AR/ER=1.0$, parity would exist (in a production context) with R as the rate of return, A the agricultural resource and E the equilibrium rate for comparable resources. As AR/ER fell below 1.0 a disparity adverse to the agricultural resource, and as it rose above 1.0, a disparity favorable to the agricultural resource, would prevail.

measure of the inefficiency and waste that prevails and characterizes American agriculture. These inequalities have been very considerable even during war.

One thing, accordingly, must be borne in mind always—the rates of return are the crucial indicators in achieving economy in the use of the nation's resources. They provide the measurement that is necessary, they make possible on the production side a meaningful and valid parity. Unlike the present legal price and income parities which have no economic content in an overall supply-demand context, parity for production based on the rates of return, as herein outlined, would have meaning in economic analysis. This parity would be useful to policy makers and economists alike. Moreover, parity, based on rates of return, can be generalized; for the procedure for determining this parity is fully as applicable to secondary and tertiary industries as to primary production.

The indicator growing out of the proposed income accounting developed in this section may appropriately be called the *production parity.*

Income Accounting for Social Efficiency

Here, too, it is well to start by formulating the guiding principle. It may be put thus: The ideal accounting system for this purpose should indicate whether it is possible to improve the social efficiency of a people by changing the personal distribution and use of incomes. In focusing upon agriculture the alternatives with respect to the personal distribution and use of income may be grouped along the following lines: (1) among farm families, and (2) between farm and non-farm families.

The necessary concepts and the theory for doing this kind of income accounting have not as yet been fully developed. Fearful of making interpersonal comparisons of utilities economists have been led to an all too narrow formulation of the foundations of welfare economics. It is not enough to study merely those situations where it is possible to make "some people better off without making anybody worse off."[6]

It might well be contended, however, that even this restricted formulation opens the door to important advances in social policy. Any measures which would increase the efficiency in the way resources are used would provide a larger total product and thus make possible the distribution of more income to the less privileged in society, be it in terms of food, medical facilities, housing, clothing, or in terms of income payments. Certainly when we view the very considerable losses in productivity associated with the trade cycle and as we come to realize the serious malallocation of resources in a competitive sector of the economy like agriculture, one is impressed by the very considerable gains to be had by increasing the total output of the economy and thereby paving the way for improving the lot of some people

[5] Cf. Louis J. Ducoff, *Wages of Agricultural Labor in the United States,* U. S. Department of Agriculture, Sept., 1944, for its useful data and comparisons.

[6] N. Kaldor, "Welfare Propositions in Economics," *Economic Journal,* Sept., 1939.

considerably without making anybody worse off. Two observations are called for at this point: (1) This formulation of welfare economics is essentially a part of what we have been discussing under allocative efficiency and can properly be included under it; (2) the redistribution of income and its use must be approached in terms of the values of society and basically they are the values expressed by citizens in the political claims and counter claims that occur in the formulation of policy in a democratic state.

As a political issue social welfare "constitutes a criterion of value which overrides such facts as a loss of satisfaction to individuals. The landlords who were injured by the repeal of the Corn Laws were not only individuals enjoying definite satisfactions. They were also members of an economy; as such only could they exercise any preferences."[7] The progressive income taxation illustrates this point.

Mr. A. L. Macfie in his book *Economic Efficiency and Social Welfare* has presented the argument for the broader formulation of welfare in these words, "the individual's right to any level of satisfaction is created by, guaranteed by, and developed by the community—a community of social individuals. . . . The sanction of progressive taxation is ethical. . . . The appeal to what is right and just is sanction enough for progressive taxation."[8]

Without probing further at this time the analytical foundations for welfare, a system of income accounting designed to measure how incomes affect the social efficiency of farm people, would appear to require the following steps:

1. Ascertain the amount of income "received" by farm families,
2. Determine the personal distribution of this income by families,
3. Calculate the purchasing power of the income realized by families (in terms of acquiring—by means of purchases in markets and through public services—the essentials for social efficiency including nutritious food, education, housing, clothing, free time, and the attendant goods and services),
4. Compare the realized incomes (a) among farm families, and (b) between farm and non-farm families.

Here again, the significant data that emerge from this kind of income accounting concerning social efficiency and the personal distribution and use of income lie in the comparisons of realized incomes. The goal, however, would not be that of achieving equality in realized incomes measured in terms of purchasing power for goods and services (including those available on public account) essential to social efficiency. The bench mark would be different from the production side in this respect: in the efforts of our society to improve welfare, minimum standards have become the first objective.[9] These minimum standards must, therefore, be translated into

[7] A. L. Macfie, *Economic Efficiency and Social Welfare*, Oxford University Press, 1943, p. 31.

[8] Op. cit., pp. 31–32.

[9] A second objective, more comprehensive in its scope and in its significance in economic analysis, is to equate "investments" in human agents so as to maximize the expected aggregate productivity of a people. This objective would require going much further in increasing the public "investments" in people than that specified by so-called minimum standards. This

incomes. It follows that whenever families with realized incomes too small to permit them, within the cultural and market complex in which they are situated, to obtain the necessary goods and services to satisfy these minimum standards a welfare *disparity* is deemed to exist.

Again it should be noted that a parity[10] based on this kind of a comparison (of income realized and minimum standards) is fully as valid when applied to non-farm families as it is for farm families.

Income accounting on the pattern outlined in this section will provide the data for an indicator that may well be called the *welfare parity.*

These two approaches separate sharply the function of income as incentives to resource owners in which the test is allocative efficiency from the function of income as purchasing power available to families with which to acquire necessary goods and services to permit them as people to be socially efficient.

II

The utility of the two systems of income accounting proposed in this paper should be fairly obvious. They go to the heart of some of the more vexing, unsettled problems arising in American agricultural policy. These income accounts would point the way as to what should be done about parity. They also would provide an answer to the question: Can parity be given a solid economic foundation?

On the side of agricultural production the proposed indicators would give significant clues with regard to the efficiency with which resources are allocated within farms, among farms, and between agriculture and the rest of the economy. We can anticipate some of the disparities that would become evident.

Under non-war conditions, for some time to come, we are likely to have a very considerable disparity adverse to labor resources engaged in most parts of American agriculture, especially in the South. If our proposed income accounting were to confirm this expectation, what implication would this fact have to policy? Does it mean that prices of farm products should be increased? Obviously, that is not the remedy, for to raise the price of cotton will neither solve the poverty of the South nor induce an efficient use of resources. The policy implications are really very straightforward. In a secular context agriculture is burdened with an excess supply of labor. We might speculate with regard to the causes. Certainly the rapid advances in farm technology, largely labor saving in their effects, is a factor. So is the high natural increase of the farm population. More basic, however, is the fact that for a long time (as a consequence of industrialization and the low

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formulation of welfare, converting social efficiency back into the essentials for productivity, casts the problem so that one can apply marginal analysis in its solution.

[10] When $RFI/NFI = 1.0$, parity (in a welfare context) would exist—with *RFI* as the realized family income and with *NFI* the necessary family income to acquire the minimum standards. Most families in periods of high employment would presumably show a parity higher than unity.

income elasticity of farm products), the growth of the supply of farm products has been more rapid than the demand. It should be the objective of policy, therefore, to improve the distribution of the nation's labor force and to accomplish this it is necessary to reduce the excess supply of labor in agriculture to a point where rates of return for human effort would be equal to that in other occupations.

In the case of capital we are likely to find that the rates of return in farming, again particularly in parts of the South, are considerably higher than the market rate for capital. The policy implications are plain—more capital in the form of farm machinery, equipment, and soil resources is needed in those parts of agriculture. Measures, therefore, should be undertaken which will increase the amount of capital employed in farming. The main barriers are, however, deep-seated. Many farm families with little or no equity are confronted with much price and yield uncertainty and are subject to capital rationing. It is no easy matter to correct the adverse effects of this situation.

In the case of welfare considerations it is a serious mistake to proceed on the assumption that all farm families receive incomes that are too small to permit them to enjoy a high or even a moderate level of living. It is also a mistake to assume that because the price of wheat or of cotton is low that, therefore, all families engaged in producing these products receive low incomes. On the welfare side we might expect our income accounts to show that most farm families in the Corn Belt, in the milk sheds, and in several other areas receive incomes as high and higher than the majority of the families in the non-agricultural sectors of the economy.

Nevertheless, agriculture is likely to have, under conditions of high production and employment, more than a proportionate share of the nation's families who do not receive enough income to provide for themselves the essentials for social efficiency. Does the remedy lie in higher farm prices, acreage allotments to reduce crop acreages, commodity loans, support prices, and parity payments of pre-war vintage? The answer is, of course, that none of these measures is appropriate for improving the social efficiency of farm people. Whereas such programs may or may not contribute to a better use of resources in agricultural production, they definitely are not suitable for improving the personal distribution and use of income.

When these two types of income measurements have been established we will find that there are some policies which will improve both *production* and *welfare:* The following measures fall into this group, namely, policies that (1) reduce the excess supply of labor in agriculture, (2) lessen the capital rationing in agriculture, (3) enlarge small inefficient farms, (4) lessen the price and yield uncertainties confronting farmers, and (5) increase public investments in human agents. Personal income taxation, the extension of old age and survivor's benefits to farm people and income payments to farm families that are progressive in their effects are likely to improve the personal distribution and use of income without worsening the allocation

of resources. There are also policies that would improve allocative efficiency on the resource side without worsening the personal distribution and use of income, for example, most of the technical researches of the U. S. Department of Agriculture and the State Agricultural Experiment Stations fall into this group. Then there is a third group, including several of the major agricultural policies which this country has been pursuing, which instead of improving, actually worsen both the allocative efficiency and the social efficiency of the American economy; these are: (1) the maintenance of farm product and resource prices either above or below their equilibrium value—this is bound to happen when support prices for farm products are determined according to the legal parity, when the Commodity Credit Corporation makes loans based on prevailing legal parity; (2) income payments to farmers based on size of farm, on a corn, wheat, cotton or tobacco acreage allotment or on some other measure of the productive capacity of the farm; (3) barriers that keep the excess supply of labor from leaving agriculture; (4) the sub-division of the existing, already too small, farms into smaller more nearly "subsistence" farms; and (5) an increase rather than a decrease of the prevailing price and yield uncertainties in agriculture.

Understanding and constructive criticism of policies designed to promote production and welfare will be deepened and sharpened, when our agricultural income accounting is remodeled properly.