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Agricultural Adjustment Revisited[1]

by

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In a growing, dynamic economy, change is inevitable. Changes that involve adjustments to rapid expansions in market outlets are generally referred to as economic progress. By the same token, changes involving shrinking market outlets, or product markets that are expanding at a less rapid rate then production are referred to as adjustment problems. We could cite many cases of adjustments which have been made in our economy over the past 50 years that have been referred to as progress and problems. The dismiss of the carriage industry and the rise of the automotive industry are obvious examples.

Adjustment problems are a necessary condition for, or prerequisite to, economic growth and development. Adjustment problems are absent only within a classical static setting involving unchanging technology, tastes, and income distributions. Obviously economic growth, as defined by a rising level of real per capita output, is impossible within such a framework. Thus if we are to be realistic we must recognize that adjustment problems are a price which we must pay for economic progress. It appears that we, as a society, place a high premium on economic progress. If this is the case, we must expect to pay a price in terms of adjustment problems in order to secure the desired rate of economic growth.

Agriculture is a classic example of an industry which must undergo a relative decline in order to allow economic growth and development in the economy as a whole. Furthermore, the necessity of such adjustments have been long recognized and are an explicit part of the law and practice of our land. In the 1930's we had the Agricultural Adjustment Administration and in 1958 the Farm Adjustment Branch was organized. Over this period, the term agricultural adjustment, agricultural surpluses, etc., have been recognized and much discussed by both economists and laymen. Despite the fact that the adjustment problem has been recognized by economists and laymen alike, I believe that there remains much to be learned and said about the nature and process of the agricultural adjustment problem. I view the relative question with regard to adjustment to be (1) how can a given degree of economic growth be secured with a minimum social adjustment cost, (2) and how is the cost of adjustment to be shared by various segments in the economy?

The Concept of Adjustment

In spite of the volumnious adjustment literature, I feel that many economists and most laymen view adjustment within rather inadequate conceptual frameworks. It appears that such naive models have led to certain broad and sweeping generalization that obscure the relevant issues. In this section, I propose to present a

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[1]Paper presented at the Southwest Social Science Association meeting in Galveston, Texas, March 27, 1959. Leonard Miller made several helpful suggestions which have improved the analysis presented in the paper.

series of models which apparently have led to certain conclusions and solutions, some of which I consider to be wholly or partially invalid.

Model I

Model I is the "cost reduction-increase efficiency model." In this model, the income of individual farmers is emphasized and the typical farmer is thought, perhaps not without reason, to be operating at a non-optimum point on a technically inferior production function. Point a on function 1 in Figure 1 illustrates such a possibility. The solution which follows from this micro-static model is "adapt improved practices and thereby cut costs and increase net incomes." Numerous farm management studies show that within the micro-static framework of assumptions, such individual adjustment opportunities do exist. These adjustments usually result in a shift to a point such as b on a new function such as II. Thus, such adjustments tend to be cost reducing and output increasing as viewed from the firm level.

Currently Model I enjoys little favor among agricultural economists as a means of solving the broad adjustment problems of agriculture. Yet, I believe among many groups the belief exists that if each farmer made the shift from a to b the problem would be solved. The obvious limitation of this model is that it ignores the aggregative impact of individual action by assuming that optimum individual action is consistent with industry welfare.

There are numerous farm management studies which show that cost reducing-efficiency increasing reorganizations invariably involve larger units. It is evident that not all farms can become larger. Thus it is obvious that adjustments such as those suggested by Model I involve greatly reduced farm numbers. Yet there are, to my knowledge, no data which suggest that a reduction in farm numbers would reduce aggregate farm output. On the other hand, there are many studies which show that farm enlargements tend to result in an increased output per acre. Given an inelastic price demand schedule, such individual farm adjustments would be expected to result in a decreased gross farm income. Thus, as individual farmers adjust, by increasing the size of their units or moving out of agriculture, net farm income might be expected to decline.

It has been argued that as farmers move out of agriculture, farm income is distributed among fewer farmers, therefore, the net income per farmer is increased. Given a net farm income and fewer farms this is of course an obvious arithmetic truth. However, one would suspect that as the number of farmers decline, capital in agriculture would increase. That is, capital would be substituted for farm operators. If this is the case, then the owners of these additional capital resources would expect to share in farm income. Consequently, the residual distributive share per farmer may, in fact, increase little if at all.

Model II

Model II is the "produce other products model." This model is based on the hypothesis that farmers are quite inflexible, and even stubborn, in that they

refuse to adjust their operations to produce products which the market demands. This model in its simplest form emphasizes the need to change the product mix with little thought being given to the total magnitude of output. Such reasoning goes in terms of "now the trouble is that wheat farmers think about nothing but wheat. If only they would go to grass and produce beef, the surplus problem and the income problem would be resolved." This adjustment would consist of a shift from point a to b on the iso-resource function in Figure 2.

The more "sophisticated" disciples of Model II view the model as being an aggregative or macro one. Thus they argue that the nature of the adjustment needed is a shift from say point a to point b in Figure 2 which would result in a socially superior product. Furthermore, since livestock tend to utilize a greater magnitude of resources per dollar of output a reduction in total output would be accomplished by shifting say from wheat to beef. Such conclusions apparently have a great deal of appeal both within and without our profession.

It would appear that inadequate attention has been given to the transition and the "equilibrium" income problem involved if farmers in general were to take this particular set of solutions seriously. Since, as the advocates of this solution rightly argue, resource inputs per dollar of output would be greater in a livestock type of economy, it is rather apparent that the net income of farmers would undergo adverse changes as a consequence of this particular "solution." It does not take sophisticated budgeting or programming to show that for the Great Plains farmer, wheat on suitable land is a superior alternative to livestock even under very adverse wheat yield and price assumptions. Thus it would appear that if such changes are to be made, drastic changes in the factor market structure will be required.

Model III

Model III is a classical static supply-demand model. One wonders if this is not the model which underlies the thinking of a very significant number of agricultural economists defined by membership in AFEA and the more sophisticated laymen. However, as would be suspected, this model has many versions. One very popular version of the model attributes a major share of the disequilibrium in agricultural output and incomes to the various current agricultural price programs. The argument is that, through various manipulations, agricultural prices are supported at above equilibrium price level such as OP_1. This price results in an output of OQ_1 and a market price of OP_2. Thus at price OP_1 the market will absorb only OQ_2 of the output. Consequently, it is necessary to store, give away, burn or otherwise dispose of a surplus of the magnitude Q_2Q_1.

The solution which obviously follows from this model is that prices should be allowed to seek their equilibrium level, OP_3, so that OQ_3 output would result. The market then would absorb the production at this price and no surplus problem would exist. Presumably this particular solution would also solve agricultural income problems. Reliance on such a model would seem to lead to agricultural programs such as flexible support prices or no program, etc. The major shortcoming of this particular version of the model is that it fails to consider the dynamic nature of the agricultural industry, and the economy in general, and it does not

Model I

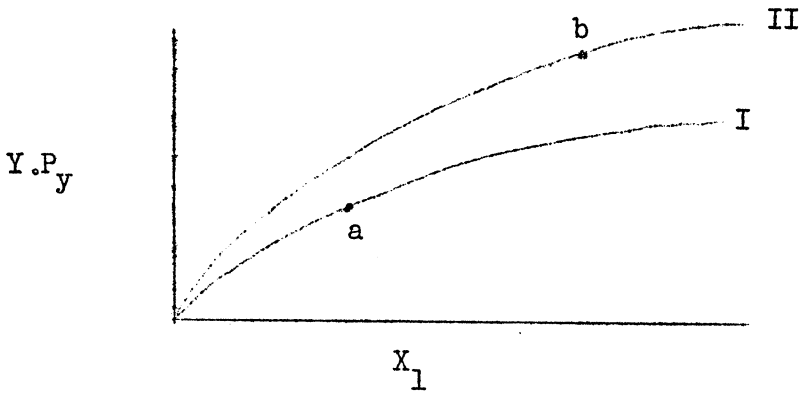

Figure 1.

Model II

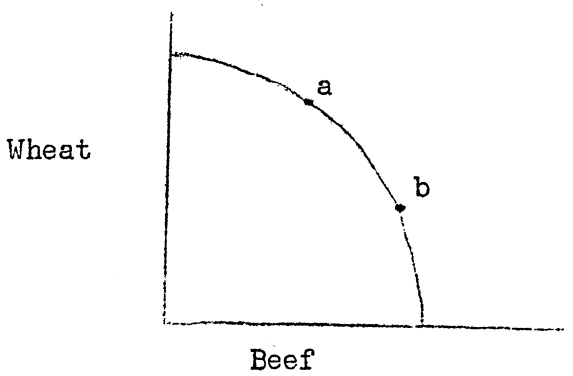

Figure 2.

Model III

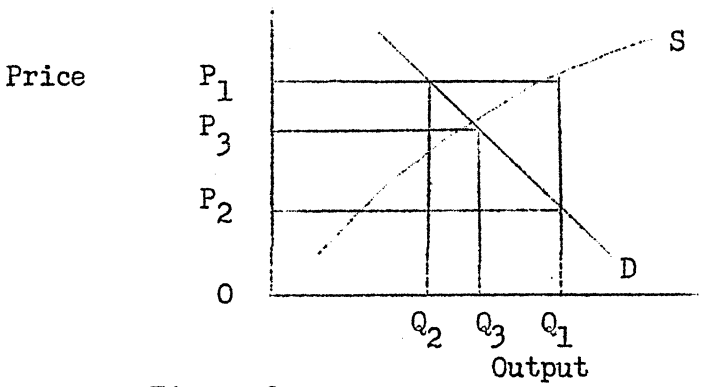

Figure 3.

recognize that an equilibrium in supply and demand does not assure equilibrium levels of income within and between agriculture and other segments of the economy.

An apparent modification of Model III is the recognition of the apparent extreme inelasticity of supply and demand of agricultural products and the consequent large income effects of small disequilibriums in output and demand. Another modification is the recognition of variability in supply which again coupled with an inelastic demand generates large gyrations in agricultural incomes. Some advocates of this model point out that empirical estimates show that the magnitude of disequilibrium in supply and demand is really quite small. The current statement is that "if supply were only 4 percent smaller, then supply and demand would be in equilibrium and the adjustment problem would disappear".

A somewhat more realistic version of Model III is depicted in Figure 4. In this model, both supply and demand are depicted as shifting to the right over time. Supply shifts occur as a consequence of improved technology, improved managerial organization, etc. In a similar manner, demand shifts are a consequence of population increases, income changes, changes in taste and preferences, etc. This model is an important advance over the simple version of Model III in that it clearly recognizes the dynamic nature of the agricultural adjustment problem and emphasizes that adjustment is a <u>continuing</u> phenomena as opposed to a simple static disequilibrium which would require rather simple adjustments. Recognition of this simple fact would, I believe, represent an important advance in the thinking of many persons.

Several rather detailed projections of the expected nature of the shift of agricultural output and demand have been made. Projections of Bonnen and Black, Rogers and Barton, and Daly are those most frequently referred to. In examining these projections, one is led to the conclusion that supply will continue to shift at a rate somewhat faster than demand over the "foreseeable" future. Thus the agricultural adjustment problem is not likely to decrease in magnitude over the years.

One can hardly be surprised that the various projections referred to anticipate a faster rate of shift in supply than in demand. This obviously follows from the fact that in the past, supply has shifted more rapidly than demand. The projections mentioned are in one form or another projections of past trends. Thus it is obvious that this particular trend is projected to continue. It should be noted that the workers referred to are very careful to state that their figures are "projections, not predictions". One is left to wonder why one wishes to project a set of data for any purpose other than to predict the future course of the variable.

As I examine the projection referred to, I am left with the uncomfortable feeling that these sophisticated sets of data are based on the simple proposition that what has been, will continue to be. Considering the drastic structural changes occurring in the agricultural industry, one wonders if this is a likely or reasonable assumption. Obviously the program prescriptions which grow out of the version of Model III given in Figure 4 are somewhat more complex than those preceding. By and large, these prescriptions tend toward the various rigid control programs of say Cochrane and the compensatory payments plan, such as that of Brandow.

Model IV

With the advance of the agribusiness concept a fourth adjustments model appears to be emerging. This model might be referred to as the "work together as an agribusiness industry" model. One version of this model is stated in terms of the plea for better working relationships between the supplier, producer and marketing sectors of the agribusiness industry. The assumption seems to be that if such improved working relationships were the case, the entire industry would be in equilibrium both within the agribusiness industry and between agribusiness and other sectors of the economy.

In Figure 5, a simplified sketch of the agribusiness structure is presented. D_r represents the demand for farm products at the retail level and D_f is the demand for farm products at the farm level. D_f is, of course, a schedule derived from D_r. S_F is the supply of farm products at the farm level. Obviously, this is a complex schedule which involves the supply schedules of the many firms supplying factors for farm producers as well as the demand for these factors by the producing firms. In a similar fashion, S_m is the supply of marketing services at levels beyond the farm. I conclude that if we accept the usual static assumptions including perfect knowledge and the timeless assumption, the agribusiness industry would be in equilibrium in the sense that the optimum level of output at the farm level would correspond to the optimum level of output at the marketing and processing levels. It follows that given perfectly mobile resources, remuneration to resources both within and without the industry would be in equilibrium.

Obviously in the real world the static conditions do not hold. Consequently, it appears that there are important divergencies of interest between the different sectors of agribusiness. The current interest on the part of ginners and seed processors in Plan B, while a majority of growers seem to favor Plan A, seems to be a symptom of such divergence of interest. In the short run, suppliers and marketing firms usually find that they maximize profits at a higher level of output than would maximize the income of producers as a group. This follows from the differential elasticities of demand, differences in asset structures and other differences characterizing the various segments of the industry. These differences exist even if we may assume an absence of noncompetitive elements in the various sectors of the industry.

Model V

The model, which I shall refer to as the "let's solve the problem by the commodity approach", has gained many advocates in recent years. The reasoning goes that American agriculture is so diverse that programs suitable for dairy farmers is unsuitable for cotton farmers and no single program can be devised which is acceptable to all types of farming situations. Thus the solution which follows is that farmers should organize by commodities to solve their own problems. The obvious limitation of this model is that the rate of product substitution for a given farm is greatly different from zero. Consequently the problems of commodity A tend to be solved at the expense of other commodities. I suspect that within the next ten years as cropland converted to grassland is withdrawn from the soil bank, we should hear charges, not without basis, that crop problems have been ameliorated at the expense of livestock producers. Basically in this, and many other agricultural programs in recent years, we have effectively subsidized farmers to bring about conditions which would result in a transfer of income from established livestock producers and established areas to new livestock producers and new areas.

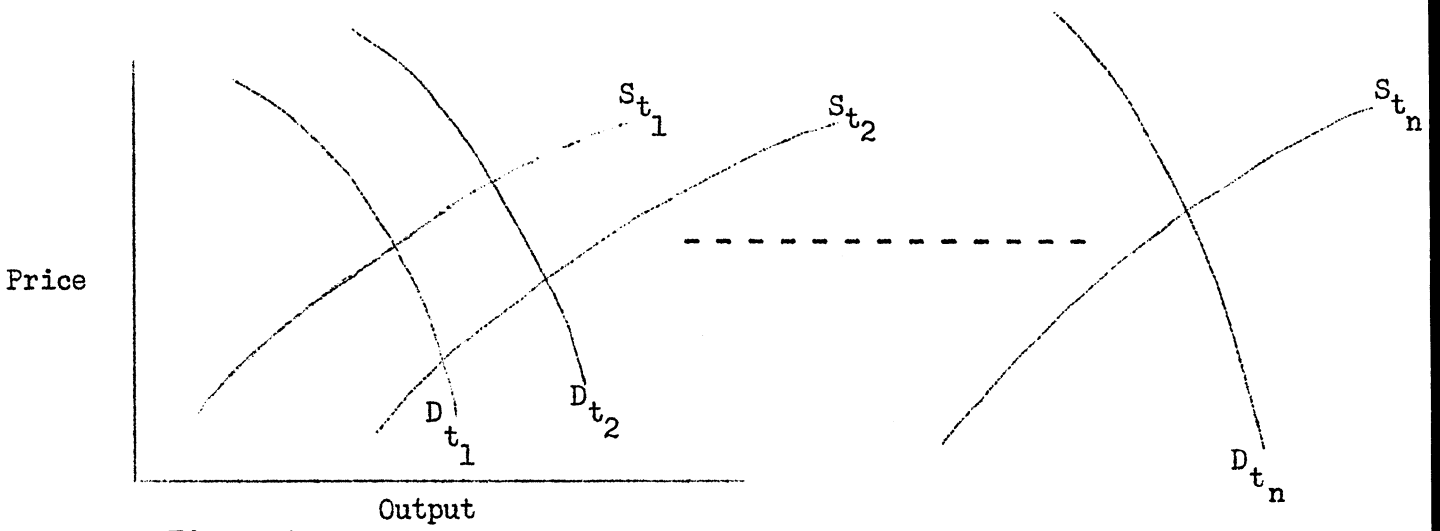

Figure 4.

Model IV

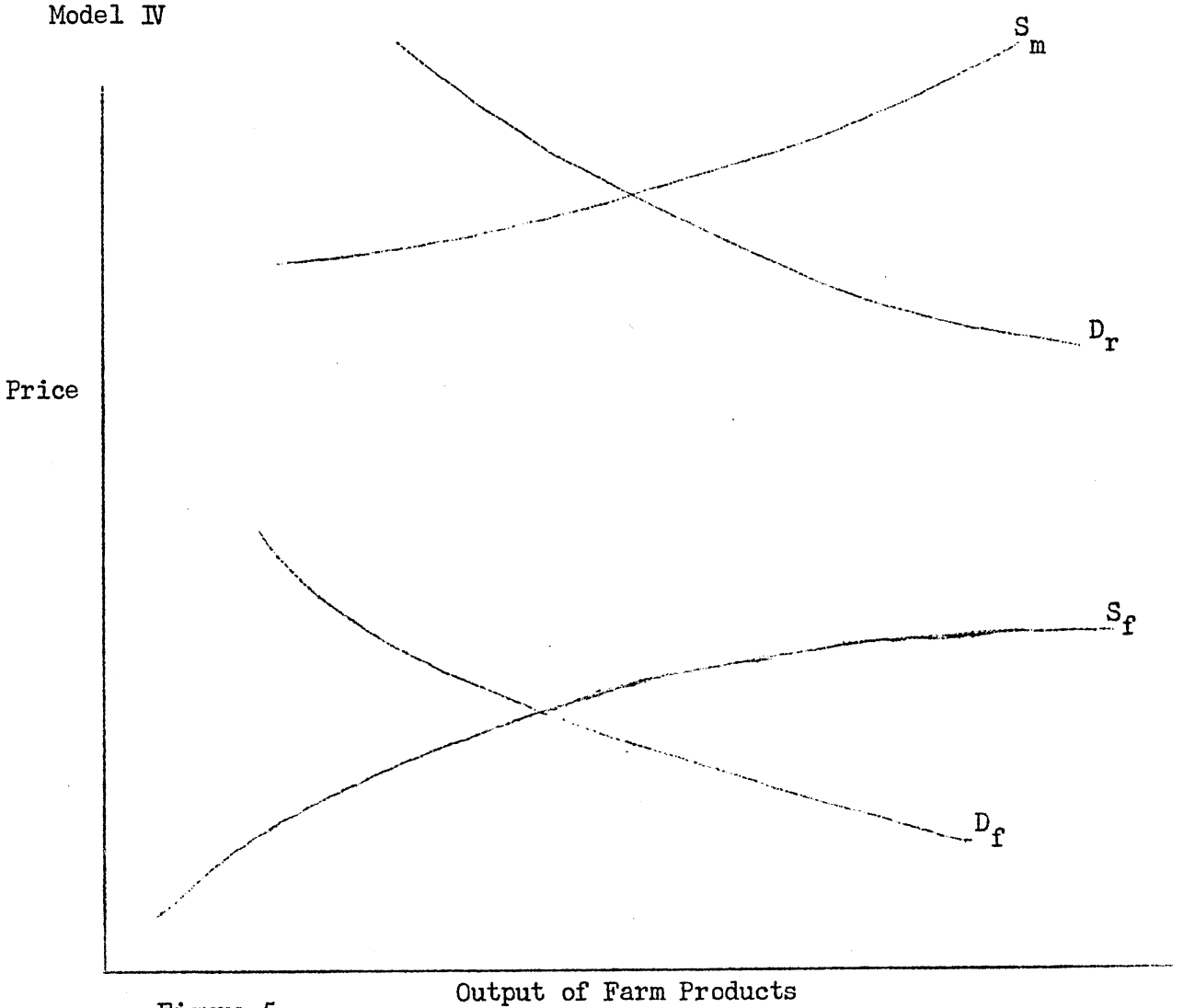

Figure 5.

Three Factor Markets

Labor

Much has been said and written about the immobility of farm labor and farm operators. The drastic changes in the structure of the farm population in recent years belies the general assumption that farm labor and farm operators are immobile. I would hypothesize that the immobility that does exist in farm laborers and farmer operators are attributable primarily to the difficulty in moving their capital assets from farming and to the lack of a non-farm job opportunities. My observation to date leads me to give little credence to the apparently observed labor immobility as a consequence of the value patterns of farm operators and farm laborers. Furthermore, I have seen no data which would lead me to believe that farmers move out of agriculture at a rate slower than feasible alternative opportunities develop. I would hypothesize that any lag in movement is a consequence of the nature of the non-farm demand for farm labor and not to the nature of the supply schedule of farm labor for non-farm jobs.

Land

Land prices during recent years have advanced materially in the face of falling farm incomes. A part of this price advance may be attributed to speculative investments in land on the part of farmers and non-farmers. However, most of the impetus for stronger land prices is directly attributable to farmer activity in the market. Thus it is appropriate to examine the reasons that farmers are seemingly willing to pay a higher price to get into or continue in an industry which currently faces, and likely will continue to face, serious adjustment problems.

Economic theory suggests that given a firm producing a single product with two resources, where one resource is fixed and the other variable, the marginal product of the fixed factor increases if the variable factor is modified to become more productive or if a new variable factor is introduced. If we may generalize from this simple model and assume that to the typical farmer, land is a fixed resource, then the general effect of technological innovation is to increase the marginal product of land. Thus, again if we assume that the typical farmer views land as being a fixed resource, then we may assume that the land market is currently reflecting rational action on the part of farmers. Furthermore, we may expect continued increases in land prices as a consequence of continued technological advance.

Without doubt the land market is affected by the desire of many people to own land as a hedge against inflation and for various and sundry intrincitive reasons. In addition, it would appear that any attempt to restrict agricultural production by restricting land use or limiting the use of land for agricultural production would tend to increase the marginal productivity of land remaining in agricultural use and thereby increase the price of such agricultural lands.

It should be noted that the impact of technological advance has been quite different in different areas of the country and with respect to different commodities. Great Plains farming and Corn Belt farming are excellent examples of these differences. In the Corn Belt area, technological advances have been both cost reducing and output increasing. On the other hand, in the Great Plains, particularly on wheat farms, technological advance has been primarily that of

increasing the substitution of machinery for human labor with only limited increases in output. Obviously the latter situation involves a much greater adjustment problem in terms of the labor and capital resource than is the case in the Corn Belt area. The Great Plains area requires much greater adjustment in labor resource and the capital resource as much larger units are required to efficiently utilize available machinery. In a similar manner, land prices have increased relatively little in areas where the adoption of improved labor saving technology has not been feasible or has been slow.

Capital

The difficulty of securing sufficient capital to begin farming or to expand existing operations is a well documented part of agricultural economics literature. Another phase of capital immobility within agriculture and between agriculture and other industries are less well understood. An example is the difficulty of a present day farmer converting his capital assets in farming into liquid capital to transfer to other occupations. I would hypothesize that this immobility aspect of capital tends to contribute substantially to the immobility commonly attributed to the labor resource.

It would appear that the capital market for agriculture will need considerable modification in the years ahead. Specifically, I would hypothesize that there will be a greater need for capital from non-agricultural communities and sources to finance farming and ranching of the future. One reason for this is the generally expected increase in total and per farm capital requirements in the future. A second reason is that as farm numbers decline and people move out of agriculture, they tend to move their capital assets to non-agricultural communities. Consequently, lending agencies in agricultural communities have smaller reserves and are therefore less able to meet the capital needs of farmers.

It is generally thought that farmers view the land resource as being fixed over relatively long run periods. This tends to cause technological developments to be capitalized into land values. One may hypothesize that if capital markets were sufficiently modified, farmers might be less inclined to consider land as being a fixed investment from the viewpoint of the firm. Thus, one wonders if such increased capital mobility might impede, to some extent, the tendency for technical innovations to be capitalized into land values.

I would conclude that our knowledge of the resource markets does not suggest that the factor markets are or will be capable of solving the agricultural adjustment problem. It is true that rising land prices materially improve the long run incomes of owners of the land resource. Thus perhaps one might argue that this form of capital accumulation may be one way that society might share the cost of agricultural adjustment. Yet, further examination reveals that rising land prices are in effect intertemporal income transfers within the agricultural industry. Furthermore, there is no evidence which would suggest that any reasonable outmovement of labor will decrease farm output.

Approaches to the Solution of the Adjustment Problem

If we recognize the agricultural adjustment problem as a continuing symptom of technological growth in agriculture, and of economic growth in the economy as a whole, two overall approaches to the solution of the problem emerge. These are (1) modify and/or control the demand variable so as to cause demand to keep pace with the output of the industry, (2) modify and/or control the supply function for the industry in order to keep output and demand in equilibrium.

Exhaustive examinations or possibilities for modifying the demand structure for agricultural products have been made. Suggestions that have been made include (1) subsidizing consumption by low income groups, (2) developing foreign trade outlets, (3) developing commercial non-food uses for agricultural products, (4) developing new farm products to substitute for those currently in surplus, (5) using agricultural surpluses of this country as a tool for economic development in foreign countries, (6) advertising and otherwise promoting agricultural products in order to encourage increased consumption in this country.

Some writers conclude that there are possibilities of using surplus commodities of this country to stimulate economic development in foreign countries. However, the mechanism for such employment of our surpluses remains quite vague and unsettled. Thus, I conclude that at this time the possibilities of such schemes are unknown. By and large, it has been concluded that the possibility of stimulating further consumption in this country are limited. In general, subsidization of the consumption of one group of commodities results in a gain for this group at the expense of other groups. Thus, net changes tend to be small. Likewise, at the current terms of trade facing agriculture, apparently there is a limited possibility for using agricultural commodities in additional industrial usages. Thus, most writers agree that the burden of agricultural adjustment must rest on the supply side. That is, if the adjustment problem is to be eased, we must find ways of dealing with rates of output at the industry level or continue and expand various subsidy programs.

We are all familiar with the vast contribution to the productivity of the economy which have been made possible by rapid technological growth in the agricultural sector. Considering the magnitude of the benefits which society in general has enjoyed as a consequence of these advances in agriculture, it would appear reasonable that society might be willing to share in the cost of the adjustment problem in agriculture.

Most economists when discussing income problems (other than those of college professors) like to restrict their statements or recommendations to parento better solutions. If we insist on thus restricting our scope with respect to agricultural policy, we as economists can have very little to say about agricultural policy in the decades ahead. However, if we assume that society does, in fact, wish to ease the adjustment problems in agriculture by raising the rates of remuneration to resources in agriculture to levels near those in other segments, we as professional economists may make a real contribution by developing ways and means of achieving such goals. Obviously, if society is to continue to be interested in raising the resource remuneration in agriculture, the agricultural industry must continue to contribute to society by a continual improvement in efficiency within the industry.

There is no research which would suggest that farmers are reluctant to accept direct compensatory payments as a means of equilibrating resource earnings in agriculture with those in other sectors. However, the declining proportion of our population with roots in agriculture makes one wonder if over a long period, society will be content to make direct contributions to agriculture. Thus one might be led to conclude that through various means it will be necessary for agriculture to arrange to secure its "just dues" in the market place. This, of course, inevitably means some type of restrictive program or policy.

Basically, restraints on output in agriculture could be achieved by direct government actions such as declaring agriculture to be a public utility a la Cochrane or by a strong organization for agricultural producers with control authorities. All economists are familiar with the difficulties of agricultural producers organizing to control production. It may be argued that a tendency toward larger production units and integrated types of production may facilitate such organization. Yet, we must recognize that the case of broilers it is certainly not an encouraging one to view. Observations tend to suggest that the various integraters in the broiler industry are powerless to control output. In fact, one might argue that integration and the consequent struggle for market position, with respect to both factors and products, has made production control even more difficult than was true prior to integration. This evidence coupled with the fact that the temptation for any individual to "break the pact" would be very strong, leads me to doubt the feasibility of output control by producer organizations.

If we accept this position, then we might conclude that if we are to achieve substantial control over output in agriculture we must put increasing emphasis on control via publically organized programs. Most of us do not like to face this conclusion. Yet it would appear that the profession might make a much greater contribution by assisting lawmakers and producer groups to arrive at programs and processes which will achieve effective control than to continue to wish for the problem to disappear. Otherwise we might wage a brisk battle in an ivory tower vacuum while the real battle is fought and won, or lost, on an entirely different and far removed front.

Comments on

AGRICULTURAL ADJUSTMENT REVISITED

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Plaxico has presented an interesting paper. Agricultural adjustment has been visited many times. How much has been accomplished by these visits is a difficult question to answer. From the number of models presented by Plaxico perhaps the issue has only been confused.

I would like to organize my comments on this paper in terms of the models presented by Plaxico. I will not comment on the major portions of the paper where it appears Plaxico and I are in agreement, but only where I think the analysis is not as complete as it might be.

MODEL I

The paper leaves the impression that the major adjustment to be made intra-firm is the shift to a new and superior production function. Ex. post. one of the major causes of inefficiency is operation at a non-optimum point on a given production function. Much effort has been expended over the years to reduce this cause of inefficiency. Extension activities in the area of Outlook is an example. Also, it appears, the "ever-normal grainery" concept had as its objective the reduction of violent swings in commodity prices rather than a means of income-transfer in mind of Henry Wallace. The above statement is based on a seminar discussion given by Wallace in 1954.

Plaxico also holds that an out-movement of farmers would not increase income of the fewer farmers left in agriculture due to increased use of capital. However, there is some evidence that with an out-movement, the increase in farm size will lead to a reduction in per unit cost. This reduction would be largely due to a lack of proportional change in other inputs, due to the present surplus capacity of such items as family labor, machinery and other capital items. Heady (1) points out:

> "The model farm in the Corn Belt likely could increase to 240 acres with the power and labor on hand...Data...(indicate)... that a 160-acre farm, the typical size in most of the corn belt, has a supply of labor and machinery which would allow an acreage increase of more than 50 percent, without a proportional increase in variable outlays, and with very little increase in machinery investment."

Thus the enlargement of farm size could lead to higher income per farmer. A number of questions can be raised about this solution. For example: With the consolidation of units and the use of output increasing practices such as rotations, fertilizer, improved varieties, etc., by the larger more efficient farmers, increased output and even further reduction in the level of farm prices may occur. The relevant question appears to be: Will the increase in efficiency of production and resulting lower unit costs offset the lower prices brought about by the increase in production?

MODEL II

It is conceded that shifting production from grain and other row crops to livestock will not solve the farm problem, but such a shift may ease the individual farm income situation. A good example exists in the High Plains, an area of surplus grain and much unused labor during the winter months.

MODEL III

By way of comment on Plaxico's concern with the recent "Projections, not predictions" of Bonnen et al. I would only repeat the challenge given by Glenn Johnson at the 1958 T.V.A. Conference for cooperators to come up with something better with the use of advanced econometric methods.

MODEL IV

No Comment

MODEL V

It would seem that the first commodity group to organize may obtain large benefits from such activities as advertising, just as the first farmers obtain benefits from the adoption of an out-put increasing innovation. But as most of the commodity groups organize the benefit will accrue to the paid officers of the organization and the advertising agencies holding the accounts.

MODEL VI

Commenting on Model VI Plaxico states: "It would appear that the glitter of Model VI must have been somewhat dulled during the past decade". He goes on to point out that a serious cost price squeeze had developed in agriculture during a period of high level of economic activity, and the factor markets have not equaled returns to resources between the agriculture and non-agriculture sectors of the economy.

Two observations may be made concerning these comments. First, if a high level of employment has not existed during the past decade and the vast out-migration of labor from agriculture had not taken place, then the agricultural problem would certainly be more serious than it is now. Secondly, Shultz (2) concluded in 1956 that the return to non-labor resources in agriculture were not lower than similar resources in industry.

Now to some other comments. I would like to raise a question on the use of the term "marginal product of the fixed factor". If a factor is fixed, how can it have a product due to an added increment? I think his analysis is correct in that where two factors are used to produce a single product, the marginal product of one factor will increase with the adoption of an innovation which increases the productivity of the other factor.

Plaxico appears to think the farm problem is due to the technological growth in agriculture, and the economic growth in the economy as a whole. I would suggest that the difference in the rate of technological development between the agricultural and non-agricultural sectors of the economy is the major factor. Part of this difference can be accounted for by the ability of the non-agricultural sector to control output and the adoption of the new technology as compared to the agricultural sector.

I will leave to the other discussants comment on what might be done to solve the farm problem. I think the paper has aided materially in a better understanding of the problem.

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(4) Earl O. Heady, "Adjusting the Labor Force to Agriculture", included in "Agricultural Adjustment Problems in a Growing Economy", edited by Earl O. Heady et al, The Iowa State College Press, 1958, p. 149.

(2) Theodore W. Schultz, "An Alternative Diagnosis of the Farm Problem", Journal of Farm Economics, Volume XXXVIII, No. 5, 1956, pp. 1147-1148.

Discussion of Paper 1/

by

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In the preceding paper entitled "Agricultural Adjustment Revisited" Dr. Plaxico does an excellent job in examining systematically the various proposals that have been advanced for solving the agricultural adjustment problem. His conclusions do not add up to as favorable a long run outlook for agriculture as all of us would like. On the contrary, the picture is rather pessimistic. But I find it difficult to disagree with the central thoughts presented or with much of his related comments given in support of these conclusions. By way of elaborating on a few points and some disagreement on others I would like to comment briefly on selected paragraphs.

The paper deals largely with the problem of agricultural surpluses and each proposal (or model) is examined with primary emphasis on alleviating burdensome supplies. But some of these proposals are frequently advanced as remedial measures in solving problems of low income or depressed groups, and problems of marginal resource areas. I refer specifically to Model II, the "produce other products" model, and to Model IV, the "work together as an agri-business industry" model.

Possibly these problems are not as over-riding from the standpoint of agricultural as a whole as is the problem of agricultural surpluses but they are related, have characteristics of their own, and warrant some consideration as a part of the over-all agricultural adjustment problem. Hence, I feel that it would have been well to have recognized them at the outset of the discussion. This is particularly desirable when one attempts to evaluate alternative solutions, or when one is formulating hypotheses that are to be used in analyzing agricultural adjustment problems in general.

Regarding Model I, Plaxico says that the "Cost reduction-increase efficiency approach, in and of itself, offers little as a means of solving broad adjustment problems". His point is that the long run effects of scientific advancement in agriculture are largely surplus creating for the industry as a whole, and consequently a further need for adjustments. One can hardly argue with this position, but it should not be implied, and I doubt that Plaxico would hold, that in the future individual firms should forgo cost-reducing innovations.

1/ Paper entitled, "Agricultural Adjustment Revisited", by James S. Plaxico, Oklahoma State University, presented before Agricultural Economics Section, Southwestern Social Science Association, Galveston, Texas, March 27, 1959.

Turning now to the section on factor markets, one or two comments seem warranted. Concerning labor, Plaxico attributes much of the immobility of farmers into off-farm employment "to the difficulty of moving capital assets from farming". I assume that land represents the greater part of such capital assets. However, to me, the discussion on land, in which the recent rise in prices is noted and explained, implies that there are ample opportunities to liquidate such assets. Data on land transfers in sample counties in Arkansas appear to bear this out. Between 1950 and 1959, as much as 64 percent of the farmland in one of the low income-surplus labor counties changed ownership. As would be expected, the transfer rate was appreciably less in counties in the better farming areas.

Finally, in connection with the capital market, the increasing capital requirements for carrying on efficiently organized operations is correctly stated and cited as a reason why availability of capital from other segments to finance agriculture will be needed in the future. A second reason given for continuing stress on capital is that as farmers move out of agriculture their capital assets are also moved, thus "reducing the reserves of agricultural lending agencies for meeting the increased needs of farmers". I am not aware of the fact that farmers as a group contribute much to the funds that established credit agencies use in serving agriculture. However, they do provide much assistance toward farm ownership by carrying sellers' mortgages.

If I interpret correctly, Plaxico makes two basic conclusions in his paper; (1) that control of output at the industry level is the only effective way by which farmers can be assured "just dues" in the market place, and thereby eventually equate resource earnings in agriculture with those in other sectors; and (2) that in controlling output producer organizations will in the long run prove ineffective, making publicly organized programs necessary.

In the main these points are well founded. But I would call attention to one point. The broiler industry was cited as a case in which producer groups have been ineffective in controlling output, even though substantial integration has occurred. I would suggest that so many factors have been involved in the marked growth of the broiler industry that it is a bit premature to draw such conclusion at this time. One could question whether the industry as a whole has yet reached a stable level in the integration process, and particularly whether a "post-integrated" equilibrium price has been reached. With specification production, buying, and processing for selected markets such as T.V. dinners and similar standardized consumer products it seems to me that the well integrated producer-processor has a real opportunity to gauge output reasonably well to effective demand. At least this is an area around which additional research might be fruitful.

From the standpoint of needed research pertaining mainly to production activities, I would suggest these problems for your consideration. The list only includes the more general areas and could be expanded I'm sure.

1. Studies designed to evaluate critically alternative policy proposals from the viewpoint of individual commodity groups, of the agricultural industry, and of the economy as a whole. The objective here would be to formulate basic "ground rules" for individual commodity or area programs which when combined would best serve agriculture and our total society.

2. Studies concerned with closer coordination of the best interests of individual firms with that for the industry as a whole. If the principle of maximizing individual firm profits is inconsistent with optimum benefits for the industry as a whole, on what basis should the individual be restrained? How does the conflict in the interest of the individual firm and of the whole industry differ for integrated industries such as broiler production and ones in which there is little or no integration.

3. Studies of cost reducing-efficiency increasing innovations as applied to individual farms, by size groups, and by varying resource situations.

4. Studies of the effects of institutional factors on common patterns followed in the enlargement of farms to efficient units. Farms commonly are made larger by combining widely scattered tracts, which multiplies problems of organization and management. Could improved methods of transferring property by purchase or lease agreements reduce these problems?

5. Studies of the capital market serving agriculture to determine practical changes that would facilitate meeting the increased requirements of efficient production units. How can credit agencies supply young farmers with sufficient capital early in their careers as farmers and at the same time avoid undue risk?

6. Studies of the minimum resources required to produce given levels of income when combined in optimum proportions.

7. Continued data gathering activities with emphasis on input-output data for various resource situations.