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COSTS OF AGRICULTURAL PRICE SUPPORTS

Lessons from the U.S. Experience

by

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I

Writing a paper on farm price supports gives one little or no opportunity for saying anything new. Given the American experience of forty years of price support programs in agriculture and all the data that have been accumulated over those years, there can be little room for new insights. While what I shall say has already been agreed upon, it deserves repeating, especially as we are now at a threshold of deciding whether to retain the old machinery for supporting farm prices in this era of food shortage. If the machinery is kept intact, a few years from now we surely will see a resumption of effective and costly price supports.

The consensus for years has been that price support programs are expensive to the consumer and taxpayer; they are distortive within the economy and distort trade among nations, and they have failed to achieve the distributive goals that their designers had in mind. Moreover, the documentation of the failure of price support programs for agriculture is given substance for future action by the fact that the items of failure can be predicted by economic reasoning. The high costs, the distortions, and the perverse redistributional effects are not an accident of history. In a world in which things are the way they are because of strong underlying forces, a repetition of old, wrongheaded, policies will inexorably lead to the same failures. Thus, even though my task is to go over old lessons, they are important old lessons, which, if properly learned, may help a new generation avoid the mistakes of the past.

II

A. Price Supports and Supply Controls

To maintain an artificial price for a product--one which is greater than the market clearing price--either the surplus has to be

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purchased or potential supply must be reduced by rationing among the producers. Two predominant rationing procedures have been: i) limit land in production (acreage restrictions or land retirement programs), or ii) require permits for marketing (production controls). In the latter case, the permits themselves become the limiting factor of production, whereas with acreage restrictions or land retirement programs, land is the controlling factor. In either case, if the supply control is to be effective, one of the inputs in production becomes fixed in total. Trading in the input may be allowed but the aggregate supply of the limited input cannot be altered except by fiat. The main difference in the two methods resides in the fact that there are no economic substitutes for marketing permits (unless they can be counterfeited or avoided by development of black markets). Fertilizer and to some extent labor and other inputs can be substituted for land, hence acreage restrictions have never been as effective in controlling supply. During the period of the accumulation of large grain stocks, policy makers in the United States were continuously surprised by the degree to which land had substitutes.

B. The Effects of Price Supports upon Income Distributions

One of the most widely accepted empirical regularities of economics is Engel's Law, and budget studies today confirm the finding that the higher the family income, the lower the portion of income spent on food. Thus, the higher the price of food, the greater the effect upon people with low incomes. Gale Johnson (1973) estimates that in recent years, supply management in the United States has resulted in about a two percent reduction in farm output. He also estimates that the long run demand elasticity for farm output is about unity. This would imply that farm prices during the past few years have been about two percent higher than they would have been in a free market. For high income families who spend only a small part of their income on food, the effect on purchasing power would be rather small; however, for families who spend half their income on food, the income effect of the artificially high prices would amount to about one percent of their income. 1/ Essentially, the price support programs in agriculture represent a tax on food. A more regressive consumer tax would be difficult to devise.

The regressive nature of price support programs vis a vis consumers of agricultural products is so obvious that one can find little argument otherwise. What is less readily obvious to the general public is that price supports maintained by input restrictions are largely regressive in their effects within the farm population itself. The main

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1/ These are highly aggregated figures. For example, for low income families who have small children, the artificially high milk prices in the U.S. may have an even greater income effect.

beneficiaries of price supports with supply controls are the owners of the limiting input; either land owners or owners of marketing permits, depending upon the method of rationing used to maintain the artificial price. Moreover, since marketing permits and acreage allotments are historically based upon past production, large farm operators benefit more from the programs than small farm operators.

Data exist to verify the perverse redistributional effects of supply-controlled price support programs. However, prior to looking at some of these data, let us recount the economic rationale for why particular redistributions occur.

First, note that the present value of an income producing asset is the discounted sum of the expected stream of all future returns to the asset. For example, the unexpected find of minerals on a piece of land has an immediate effect upon the sale value of that piece of land determined by the expected net receipts from future sales of the mineral, appropriately discounted by interest rates. It is the owner of the piece of land containing the mineral who benefits from the discovery, not the miners who work the find nor the owners of mining machinery. 1/ So it is with the implementation of a new price policy in farming. The creation of a future stream of rents along with identification of who is to receive that stream of rents via the right to "grow" or the right to "sell" is incorporated into the market price of the asset which establishes the right to "grow" or "sell." If the future returns are correctly anticipated by potential buyers and sellers of the critical asset, the current owners receive all the returns to the program. And they receive them quickly as increased capitalized value of the acres on which the crops can be grown or on the permits that allow them to sell the affected crops. The only way in which other factors of production can share in the increased flow of receipts to the farm sector due to the artificial price is for a) farm practices to be modified by the policy so that there is an altered demand for the other factors, and b) those factors to be specialized to agriculture and not easy to reproduce. I.e., in the language of economists, it is necessary for those other factors to be supplied to farming along a schedule that is inelastic. Thus, for labor in agriculture to share in the rewards to a policy that increases the price of farm products, it is necessary that the demand for farm labor be increased by the policy and, further, that farm labor be so specialized that the farm labor force cannot be

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1/ If the new discovery is large and if mining machinery could not be readily produced (at constant cost) and/or the human skills required for mining were specialized either through unions or the necessity of long, expensive training the statement is to some extent negated. Also, it is common for the discoverer of minerals to pre-contract in such a way to share the rewards as well as the risks.

readily augmented from the nonfarm sector. Neither of these conditions is met with supply-controlled price supports. First, by cutting back supply of farm products, the demand for all inputs is initially decreased rather than augmented. Second, farm labor other than entrepreneurial activity is of the sort that even school children can readily engage in it. The inputs that find their demands increased by typical price policy are land substitutes, such as fertilizer. And to the extent that supplies of such inputs can be easily expanded, they, too, fail to share in the benefits of price support policies.

Economic reasoning suggests then that one would expect to find the effect of supply-controlled price support programs mainly in the increased asset value that gives farmers the right to participate in the program, with very little or no effect upon the wages of non-entrepreneurial farm labor. Empirical studies confirm this reasoning. For example, a study has shown that the market value of tobacco allotments in the 1950's and early 60's was between $1600 and $2800 per acre while the value of comparable land in North Carolina not included in tobacco allotments was between $250 and $275 per acre. (These data are taken from Johnson (1973b). Similarly, but of somewhat smaller magnitude, it has been estimated that in the late 1950's, the value of an acre of peanut allotment was upwards of $600 in North Carolina, and in 1970 an acre of peanut allotment was worth $750. (See Johnson (1973a). Other comparable figures exist for rice, cotton, and other crops in the United States during periods of effective price supports. Also, in an important empirical study, Hedrick (1970) showed that the earnings of sharecropper labor on tobacco farms in North Carolina no more than maintained their relative position to the earnings of other occupational groups during the period from 1940 to 1960. During the same period, Hedrick found that tobacco farms in this area enjoyed an increase of 500% in real returns.

What are the implications of these findings? First, neither economic reasoning, nor the empirical evidence suggests any alleviation of poverty among farm workers who do not happen to own land affected by price support policy. To help alleviate poverty among nonpropertied members of the farm population, it is necessary either to raise their ability to earn by training or schooling, or to make direct payments to them. Given the kind of policy historically pursued in the United States, it is unwarranted to depend upon the market system to sift down rents to the poor and unskilled.

Second, price support policy with supply controls creates a rigidity in the social structure, making it more expensive to enter farming except through inheritance. Since the future stream of benefits from an artificially high price becomes embedded in the value of the right to produce, new entrants pay the full value as an initial cost. Third, there is a redistribution of income: the larger landowners benefit most, to the detriment of the taxpayer and the consumer.

C. Costs of Supply Controls and Price Supports

There are two different ways of reckoning economic costs of supply-controlled price support programs. One is to abstract away from distributional effects, concentrating upon costs due to resource misuse. The second method is to add up Treasury outlay and consumer costs.

Net resource costs consist of three components. First, because of the restriction of output due to supply controls, there is a loss to society from the subsequent failure to use marginal resources in their best alternative use. I.e., as in the case of monopoly, not enough output is forthcoming from the controlled sector and the resources released in that sector are overused in the remainder of the economy. The second type of net resource costs are those distortions in factor use arising from misallocating incentives built into a particular program. For example, if acreage restrictions are used to control output, each producer is thereby encouraged to use land substitutes, such as fertilizer, to a much greater extent than would be optimal in the absence of the program. 1/ Thirdly, in addition to the costs that arise even when supply control is effective, it has been the American experience during many past years that surpluses accrue--that the supply controls fall short of sufficiently restricting supply. (The reasons for ineffective control are twofold: 1. It proves politically difficult to face up either to lowering price support prices or being sufficiently restrictive because of pressures brought to bear by the main beneficiaries from the programs. And 2. Bureaucrats are capable of being fooled by farmers' inventiveness at circumventing restrictions). When surpluses occur, at least the cost of storage must be added and when surpluses are "dumped" at lower prices than those at which they were purchased the resulting net loss must also be added. Moreover, no small part of this third type of resource costs is the bureaucratic cost of administering the price control programs even with effective supply control. Commonly, these latter costs are overlooked in net resource cost assessments.

In a dynamic context the American experience with supply controls has been socially schizophrenic. Much of agricultural policy has been supply increasing (cost reducing) either through direct subsidy of inputs (rural electrification, low cost farm loans, etc.), and, perhaps more importantly, indirect cost reduction through massive public support of agricultural research and extension. In counterpoint to the large programs of cost reduction, price policy and supply controls have been partially offsetting. Over time, therefore, one finds the anomalous situation of one arm of the government spending resources to

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1/ Acreage restrictions also lead to overuse of pesticides which may have long run cost implications more serious than in the short run.

increase the supply of farm products and another arm acting to decrease those supplies. A more counterproductive set of activities would be hard to devise.

Measures of the net social costs are difficult to make, and are not available for the U.S. on a systematic annual basis. Most such attempts have merely been illustrative and are unrealistic. For some rather abstract estimates based on stereotypes of agriculture price support programs, the reader is referred to Wallace (1962).

Recently, however, some estimates have been made out-of-pocket costs of price support programs and are reported in Johnson (1973). Johnson estimated that in 1968-69, U.S. Treasury plus consumer costs arising from price supports totaled approximately nine and one half billion dollars, about forty percent of the U.S. gross domestic product in farming and amounting to over $1600 per farm worker in the U.S. Johnson also reported some U.S. Department of Agriculture estimates for Europe for the same period. For the EEC countries, taxpayer plus consumer costs from price support programs came to approximately fourteen billion dollars, or about fifty-five percent of gross domestic farm product arising in those countries.

These figures are appalling. In a world concerned with hunger, it is depressing to find the industrial nations willing to overprice agricultural output. And, as shall be recounted at the end of this paper, the internal goals of such policy could be achieved by inexpensive and more effective means.

D. Trade Distortions

To maintain effective price support programs for farm products, trading blocs have been forced to adopt restrictive trade policies, which, historically have run the gamut of selective tariffs, import restrictions, and export subsidies. As an example of the latter, the United States engaged in massive export subsidy, mainly in wheat and grains, during the period of grain stock build-up in the 60's. Although Public Law 480 operated in the name of charity, it was difficult for our Canadian neighbors to view the program in that light, and economists were generally agreed that the dumping program was deleterious to the development of agriculture in the recipient countries.

Selective tariffs often have bizarre effects. For example, as reported in Johnson (1973b), the European Economic Community variable import levy on feed grains had the effect of forcing considerable import substitution by European livestock farmers to soyabean derivatives and other feeds not covered in the tariff. In the United States in 1968-69, the cost of soyabean oilmeal to farmers was about $120 per ton, while corn for feeding was priced at $41 per ton. In Western

Europe, due to a levy on corn averaging $42 per ton, oilmeal and other feed substitutes, which were not subject to the tariff, came into greater use in livestock production. Again citing Johnson (1973b), the price distortions led to substantial changes in feeding practices. In the Netherlands, for example, grain amounted to about 70 percent of all feed fed to livestock in the year prior to adoption of the variable levy and by 1968-69, the percentage had fallen to 45 percent, a reduction of 20 percent in actual grain fed to livestock over the period.

Numerous other examples of trade distortions could be cited, caused by domestic attempts in various trading blocs to maintain artificially high farm prices. Such distortions lead to false incentives, wasted resources and to a substantial barrier to world trade. Progress toward the objective of freer trade among nations will remain severely limited so long as domestic price support programs are pursued.

III

In summary, price supports with supply control policies as experienced in the United States and other industrial countries, have proved to be grossly expensive failures. The redistributive goals have not been achieved, the costs of such policies have proven to be large, either in terms of net resource costs or taxpayer and consumer outlay, and the policies have required protectionist trade policy. Moreover, the results are not an accident of history, being predictable by economic reasoning.

In what follows, alternative policy will be discussed that would cause less distortion of domestic and world markets, and accomplish the humanitarian goals which initially motivated price support policy.

A. Toward a Positive Policy for Agriculture

In a developing economy there will be a more or less constant migration from the farm population to the industrial sector. Indeed this release of population from food production for other productive activity can be taken to be definitive for economic progress. The only way in which this trend could be reversed would be for the farm population to realize lower fertility rates than the nonfarm sector. To ease the adjustment process thus required in a developing economy, two types of policy are essential. First, and perhaps most importantly, overall full employment is a key variable in allowing farm-nonfarm movement of labor. Empirical studies by Sjaastad (1961) and Bishop (1961) confirm the strong effect of overall labor market conditions upon farm-nonfarm migration. Second, it is important that young people in farm areas have access to good schooling which allow them to train themselves for nonfarm vocations. Finally, it is inevitable that some people get

caught by the uneven nature of economic progress at ages and in such circumstances that it proves uneconomic for them to retrain or move. Such unfortunate individuals, on farms or not, should be the recipients of welfare programs designed so that their incentives to work are only marginally affected.

Part of any enlightened farm policy should be to maintain a healthy and economically responsive commercial farm sector. The effects of abrupt currency devaluations and variable inflation contributes to sharp swings in farm prices and the prices of farm inputs, thus resulting in thwarted expectations and wasted resources. The events of the past two years have resulted, for example, in swings of the price of cotton from 25 cents per pound two years ago to near a dollar last year, back to below 30 cents this year. Meat, sugar and grain prices have been similarly unstable. And as this paper is written, ill advised national price fixing or energy sources, especially natural gas, is resulting in shutdowns of fertilizer plants, which will inevitably lead to price increases in an important farm input.1/ Space does not permit attention here to all such policies which affect agriculture. The point to be made is that modern farming is an industry closely connected to other parts of the economy, thus is affected quickly by conditions in other sectors.

Maintenance of stable trade patterns and monetary stability and avoidance of restrictive policies in other sectors are necessary components of a policy to maintain a viable commercial agriculture. Flexible exchange rates, the avoidance of abrupt embargoes and other trade restrictions, and a stable monetary policy would go far towards reducing uncertainties of farming.

B. An Opportunity

Given the current markets for soyabeans, feed grains, wheat, and other crops, an opportunity now exists in the United States and Europe to disassemble the old price support machinery at small expense. With current prices, most price supports are currently ineffective. But if the machinery is maintained, we can be sure that within a few years we will be back to the dreary and expensive business of restricting farm output and subsidizing farm prices. At present, voluntary withdrawal from old program mechanisms could be achieved with little or no compensation. The opportunity which exists now for making a clear break with the past may not again present itself for generations.

1/ Further short run increases of fertilizer prices are inevitable, no matter what the policy on natural gas. However, the well-head maximum pricing of natural gas initiated in the early sixties led to a virtual halt of new discoveries, contributing substantially to the current energy crunch.

C. Some Concluding Remarks

A ubiquitous apology for the continuation of price supports in agriculture is that other segments in society have monopoly power, hence farmers, who are not organized, need "countervailing power." There is no economic sense to this argument. Even if farmers faced monopolist sellers of their factors of production, which they do not, or monopsonistic buyers of their produce, which they do not, it is not obvious that bilateral monopoly results in any economic gain.

However, this apology could be altered to a political argument that contains an element of reality--namely, other segments of society are "getting theirs"--why not farmers too? I am reminded of an Art Buchwald column in recent years which recounts an apocryphal commentary by an industrial magnate at the 1972 Inaugural Address. As the President spoke of individual responsibilities and less dependence on government, the magnate was reassured by a bystander that small fry were being addressed, not Penn Central, Lockheed, etc. Buchwald's satire is well taken. Not all folly in federal policy is in the farm sector. Nonetheless, meaningful discussion of price support programs in agriculture should not descend to cynical acceptance of countervailing political action. Political pork-barreling in other areas is to be regretted rather than used as an excuse for ineffective and costly policies in the farm sector. Moreover, the opportunity now exists for ending the mistakes of the past at nominal cost and with voluntary withdrawal from old policies. This opportunity should be urgently seized.

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