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Bases for Setting Prices

There are many reasons for leaving the prices of farm products alone, to be set by competition in the open market. These prices continuously and automatically equate supply and demand, rationing the existing supplies impersonally among the buyers who want the product the most (or, technically speaking, demand it the most). Whether the supplies are large or small, the open-market price adjusts itself down or up to clear the market. Both surpluses or shortages disappear, and no producer or consumer goes without a buyer or seller—at the open-market price.

These prices serve also as guides to producers to produce less or more of the products they bring to the market.

The prices of most farm products, however, vary so much over short periods of time (as supplies vary in response to changes in weather, etc.) that they are somewhat confusing guides to producers. Accordingly, many farmers have urged government to stabilize the prices of their products, and sometimes government has responded.

The natural basis for more stable prices is to set them at the average of the variable open-market prices. But many farmers, when they observe these more stable prices, begin to “smell oats.” They begin to urge government not only to stabilize prices but to raise them. What basis can the government use for setting these higher prices if they respond to this request?

One base that appeals to farmers is the cost of producing the product. What could be more natural and right, they ask, than to set the price of a product high enough to cover the cost of producing it? This idea sounds simple and fair. But it turns out to be quite impractical.

DIFFICULTY OF DETERMINING JOINT COSTS OF PRODUCTION

When two products are produced jointly and inseparably, for instance wool and mutton, what is the cost of producing each one?

The "supply price" for one product may be derived by subtracting the "demand price" for all the other products from the "supply price" of the two or more products that are jointly produced.

This, however, makes the "supply price" (the price at which a given quantity will be produced for market) partly dependent on the "demand price" (the price at which a given quantity will be bought). If the demand price is low, that lowers the supply price. That is the sort of thing that farmers who want cost of production are trying to get away from.

The problem is still more difficult in the case of many farms that produce more than two products. What are the separate costs of producing corn, oats, clover, hogs, and beef cattle on Corn Belt farms? That problem is practically insoluble.

Whose Cost of Production?

Even in the simplest case of a single product (produced on farms that produce no other products), almost insuperable practical difficulties arise.

1. Anyone who tries to estimate "the" cost of production of a farm product soon finds that there is no such thing. Each farmer has his own cost of production, and these costs differ from farmer to farmer.

The cost of producing corn in Palo Alto County, Iowa, for example, was computed separately for 14 producers in a period of relatively low production costs. The results are shown diagrammatically in Figure 11.1. The cost for the most efficient producer was 28 cents a bushel. The cost for the least efficient producer was \$1.18. What was the cost of producing corn in that county?

If the price were to be set at 28 cents, most of the producers in that county would go broke. If it were set at \$1.18, that would be such an attractive price for most farmers that they would expand their production beyond the quantity that could be sold at that price.

A compromise solution would be no more satisfactory. If the price were set at the average for all 14 producers, that would have been 49 cents. (This is lower than the average of the extreme low and high costs, because it takes all 14 producers' costs into account, and most of those costs were close to the lower extreme.) At that price about half the producers would have difficulty making ends meet, and the quantity produced might be more, or less, than the quantity that could be sold at that price. And what price should be

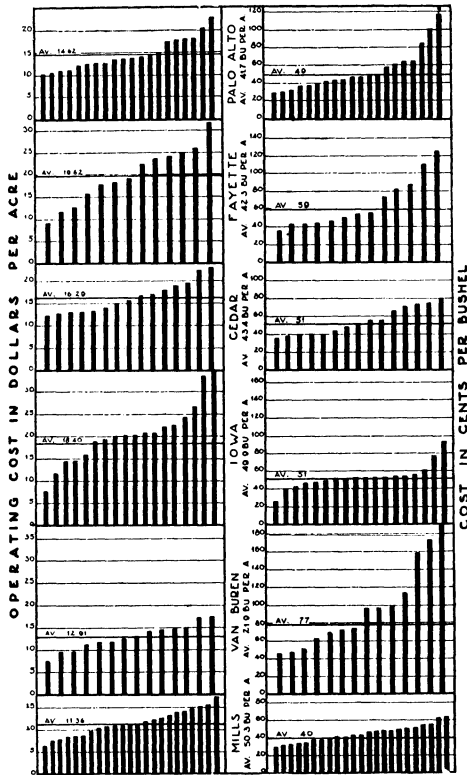


Fig. 11.1 — The variation in costs per acre and per bushel between fields by Iowa counties.

set in Van Buren County, where the average cost was 77 cents—28 cents higher than the average cost in Palo Alto County?

Another illustration is the summary of a study of the costs of producing cotton. Estimates of total cost per pound of lint varied from 23.4 cents in the Mississippi Delta Region to 38.1 cents in the Upper Rio Grande–Trans-Pecos Region of Texas and New Mexico.¹

Still another illustration is a recent carefully prepared report on the costs of producing milk in the Lima district of Peru.² This report comes up with dozens of different cost estimates, which are grouped into 32 strata according to the number of cows in the dairy. This

¹ I. R. Starbird and F. K. Hines. "Costs of Producing Upland Cotton in the United States," 1964, USDA, Agr. Econ. Rept. 99, Sept., 1966.

² This report on the metropolitan Lima milkshed is entitled "Cuenca Lechera, Lima Metropolitana, Costos de Producción de Leche 1967, Convenio Cooperación Técnica Estadística y Cartografía, CONESTCAR, Ministerio de Agricultura, Universidad Agraria."—It can be obtained from the Ministerio de Agricultura, Piso 6, Ministerio de Trabajo, Lima, Peru.

number ranges from 3 cows to over 5,000. The estimates of cost per liter of milk in 1966 ranged from 1.52 to 4.33 soles, averaging 3.02 soles (one sol = 3.7 cents). The data are given in Table 11.1.

So what is "the" estimated cost of producing milk, in a single figure? There is no such thing. There are only hundreds of different costs, differing from farm to farm. And all are merely estimates.

It will not do to use even the average of the different costs. For if the estimates of costs were accurate and prices were fixed at the average cost, half of the dairies would go out of business.

TABLE 11.1
THE COST OF PRODUCTION OF MILK IN THE METROPOLITAN AREA OF LIMA, PERU *

Average Cost Per Liter in Soles (1 sol = 3.7 cents) in Each Stratum	Number of Dairies in Each Stratum	Number of Cows in Each Stratum
1.52	3	3
2.05	1	19
2.17	4	36
2.24	4	56
2.39	6	42
2.56	8	64
2.65	14	70
2.65	4	48
2.68	5	115
2.69	6	12
2.70	3	18
2.75	10	279
2.76	10	40
2.76	8	505
2.83	8	5,049
2.94	12	120
2.96	2	2,077
2.99	11	2,627
3.02	10	363
3.04	4	52
3.05	5	1,770
3.07	2	36
3.11	18	2,202
3.17	4	60
3.20	14	2,529
3.21	13	603
3.21	4	1,746
3.28	3	9
3.30	4	80
3.44	11	1,001
3.49	5	55
4.33	4	64

* Cuenca Lechera, Convenio Cooperación Técnica, CONESTCAR, Lima, Peru, 1967, p. 14.

This apparently does not happen, as shown by studies of other crop costs and prices. "The estimated costs of producing butterfat in the Los Angeles County marketing area for eighty-one producers ranged from 46 cents to 67 cents in 1939, and from 87 cents to 67 cents in 1939, and from 87 cents to \$1.36 in 1943. The blend price of milk was high enough to cover the costs of less than 35 per cent of the producers in both years. Yet the area had an abundance of milk during 1939 and 1940, and the quantity produced increased constantly up to 1943."³ The estimates of the cost of production certainly must have been highly inaccurate.

2. Costs do not exist, like a cow; they have to be estimated. Different research men come up with different estimates, all of which are open to question.

Accountants use varying methods for estimating costs. They differ on how to compute depreciation, how to allocate costs among joint products, how to value family labor, how to include rental or land payment costs, etc. Their estimates accordingly differ by considerable percentages.

The Banco de la Nación (National Bank) in Peru, for example, in December, 1967, produced a detailed and laboriously prepared estimate of "the" cost of producing rice as 554 soles about \$14) per fanega (138 kilograms). The Asociación Nacional de Productores de Arroz (National Association of Rice Producers) arrived at 680 soles (\$17). SIPA (Agricultural Research and Extension Service) set its estimate at 624 soles (\$15.60). These estimates were offered as bases for setting the price of rice for the 1968 crop.

All of these estimates were inapplicable and misleading for setting prices. Different farmers not only have different costs but different statisticians compute different estimates: more basically, the whole cost-of-production approach is invalid. It approaches the problem from the wrong end. The world of economics and business does not work that way.

When you go to a store to buy a shirt, you do not ask what it cost to produce that shirt and then pay that price. If the store wants to charge you \$6, you simply say "I can get the same shirt across the street for \$5" (if this is the case) and you go and buy it there. You do not pay any attention to the cost of producing the shirt.

Similarly, when the housewife goes to the market to buy

³ G. M. Beal, "Economic Factors Affecting the Production of Fluid Milk in the Los Angeles County Marketing Area," Bureau of Market Enforcement, Calif. State Printing Office, Sacramento, March, 1944, pp. 14-17.

potatoes, she does not ask what it cost to produce potatoes and pay accordingly. She asks the price, and if she can buy potatoes at a lower price at a different supermarket, she goes there for them.

Under free competition, business does not start with the cost of production. It starts with what the consumer wants and will pay for and with "the competition"—the prices she has to pay other sellers.

For the reasons given above, "the" cost of production has continued to be a fruitful source of controversy but has not been found adequate or workable as a basis for agricultural prices.

THE REALISTIC BASIS FOR SETTING PRICES

The realistic and economic basis for setting prices is the supply and demand price—the price that will equate the quantity that will be produced at that price with the quantity that will be demanded at that price.

This equilibrium price is based not on dozens of estimates of costs of production, but upon supply and demand in the market; and this is based upon producers' and distributors' and consumers' *actions*—upon what they will *do*. The price is set high enough to provide incentive to farmers to produce enough of the product to satisfy the demand at that price. If the price is set higher than this, farmers will produce more than consumers will buy at that price, and there will be unsalable surpluses of the product. If the price is set lower than the equilibrium price, farmers will produce less than consumers will buy, and there will be shortages. The equilibrium price thus is based upon what producers and consumers will do.

Similarly, if distributor's margins are set too wide, they will make excessive profits, and more distributors will be attracted into the business. There will be overcapacity in the industry; the capacity will not be fully utilized, and distributing costs will be high. Because of economies of scale, the distributors are large in size and few in number; they therefore operate under conditions of oligopsony rather than free competition. In this case there is free enterprise but not free competition.

In this situation, the price-setting group can do either one of two things:

1. In the case of milk, for example, the price-setting group can set the margin narrower to drive out the less efficient distributors and to utilize fully the capacity, at minimum cost, of those efficient distributors who remain.
2. The price-setting group can rely on free competition from other milk areas to bring in milk, keeping local distributors' margins

low. It may have to enforce this competition by prohibiting local ordinances which are designed to keep "outside" milk out.

A number of the states in the United States use the first method. The federal government, however, in its federal milk orders (which transcend state borders) uses the second method.

Milk research economists show that milk distributors' margins under state milk orders are generally wider than the margins under federal orders. Federal orders do not include regulations to keep "outside" milk out.

Research is required here to show which method would work best. This research would show whether all milk distributors' profits are high, whether some or none of them are high, whether there is overcapacity in the milk distribution industry and underutilization which increases costs, and whether milk supplies could come in from other areas and at what costs.

PRICE STABILIZATION FOR DURABLE PRODUCTS

In the case of durable (storable) farm products, a government can stabilize the price of the product by appropriate actions.

These prices cannot be stabilized by decree — by simply announcing what the price is to be. Prices set by decree only bring discredit on a government. If the crop is large and open-market prices are low and the government decrees that the price is to be higher, all of the crop cannot be sold at the higher price. This is shown in Figure 11.2. The owners of the unsold surpluses will offer them at lower prices rather than not sell them at all. Buyers then will not pay the higher prices decreed by the government, and prices quickly descend to the open-market level and remain there until all of the large crop is sold.

Conversely, in the case of a small crop, the government may set a lower ceiling price by decree. At that price, supplies quickly run out. This also is shown in Figure 11.2. The process is speeded up as sellers quickly catch on and divert even the small supply from the regular market to an illegal "black market," where it can be sold at a higher price — at what turns out to be the open-market price.

It is only when the government steps into the market and offers to buy all quantities at its announced price that it can enforce this price. And even in this case, the price can be enforced only if the government can divert the product it buys from the market.

The government can remove supplies from the market only by storing them or by destroying them. And it can store only crops that are durable, that is, storable.

If the crop is storable, the government can set the price at what

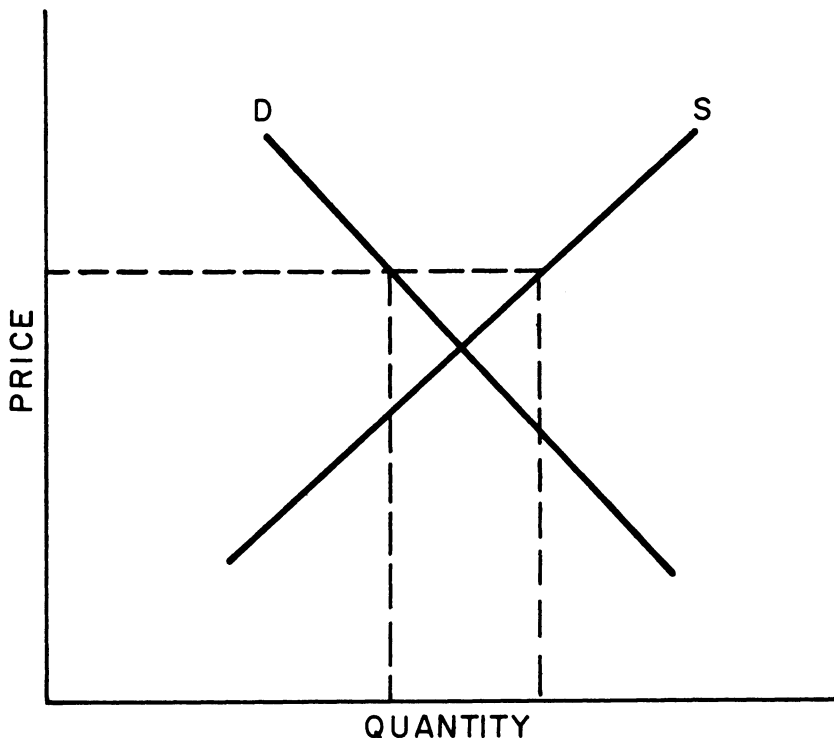


Fig. 11.2 — Effects of a high price on quantities demanded and supplied.

the average longer-run open-market price would be during the length of the storage life of the product. This may be a few weeks, or a season, or a period of several years, according to the nature of the product.

When supplies are large, then, the government can buy the excess, store it, and later return it to the market when supplies are small. If the government forecasted the demand and supply accurately and set the price properly, at the average longer-run open-market price, it will come out even on the operation, recouping the money spent on purchases of the excess supplies when it returns them (sells them back) to the market later on. Even so, however, it will still be “out” the costs of its storage operations.

It is impossible for anyone to forecast the demand and supply with complete accuracy every time. Accordingly, the government can protect itself by setting the price, not at the forecasted longer-run open-market level, but, let us say, 10 or 15 per cent below it. Then if the forecast turns out to be, let us say, 10 or 15 per cent in-

accurate, the government can still break even on its buying and selling. While if its forecast is accurate, the price will rise during the season (as it would in any case) approximately enough to cover the costs of storage. This will not only protect the government against losses but also will protect it from having to store all of the excess. If the price will rise enough to cover the storage cost, the private trade will do most of the storage.

A government price of this sort, set 10 or 15 per cent below the forecasted longer-run open-market price, is called a *precio de refugio* in some Latin American countries. This provides a refuge, a shelter for the producer — not a complete protection and certainly not a price above the longer-run open-market level, but a refuge against most of the hazard of low prices. No similar concept has become established in the United States. In this case, the Latin American countries are ahead of us in economic good sense, partly, perhaps, because they cannot afford to be as naive as the United States has been with its “support prices,” supported above longer-run open-market levels.