INFLATION AND FOOD PRICES

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Since 1972, food prices have risen more than the overall rate of inflation. This is in contrast to the preceding decade when food prices generally lagged behind increases in the prices of non-food items and services. The question which this paper seeks to answer is what can be done specifically to hold down or reduce the cost of food over and above general policies designed to bring down the rate of inflation. Among the things which the government might do is to alter support programs for farm products or to authorize additional imports of commodities like beef.

In assessing the potential role of changes in farm and food policies on retail food costs, one must keep in mind that such policies affect only raw product costs. These costs now account for only about 30 cents out of each dollar the typical consumer spends for food. Thus the potential for reducing food price inflation by eliminating farm price-support programs is quite limited.

Relative Changes in Food and Nonfood Prices Since 1972

Annual rates of change in food prices since the period of accelerated inflation began in 1972 have been more uneven from year to year than the prices of nonfood items and services. Year to year increases in food prices over the past 8 years have ranged from a low of 3.1 percent in 1976 to a high of 14.5 percent in 1973 (Table 1). Processing and distribution costs of food, which now account for two-thirds of total food expenditures (including the cost of food consumed away from home) have followed the general rate of inflation, but not raw product costs. The latter have been influenced by a somewhat unique set of forces as well as by general inflation.

Grain prices, for example, shot upward in 1972-73 in response to very large purchases by the Soviet Union. They remained high in 1974 following a short crop in the U.S. and poor harvests in several of the developing countries. This, in turn, had a profound effect on subsequent production of fed beef, pork and poultry products. Coffee and sugar prices, likewise, responded to external events. Excessive rain at some periods, untimely frosts, and too little rain in

Table 1. Average Annual Increases in Components at the Consumer Price Index, 1972-79

Year	Food	All Items Less Food*
	(per cent)	
1972	4.3	3.0
1973	14.5	3.9
1974	14.4	9.9
1975	8.5	9.3
1976	3.1	6.6
1977	6.3	6.5
1978	10.0	7.2
1979#	10.2	11.1

*Based on the percent change from the average index for the preceding year.
#Estimated change, based on data available through July 1979.

California also contributed to temporary shortages of citrus fruit and vegetables. Meat prices have been influenced, not only by the cost and availability of grain, but also by the internal dynamics of the cattle cycle. Consequently, food prices have sometimes behaved quite differently from nonfood prices.

Much of the year to year variation in the rate of inflation in food costs since 1972 has been associated with changes in the supply-demand relationships for a relatively small but economically important group of commodities including beef, pork, citrus fruit, winter vegetables, coffee, fish, and sugar. These commodities now account for around 60 percent of retail food expenditures. Thus, if we are to curb inflation in raw product costs, special attention must be given to the prices of these items.

Raw Product Costs

The limited role which farm and food policies can play in holding down retail food costs is highlighted in Table 2. The farm value of food purchased for consumption at home now amounts to only about 26 cents out of each dollar the consumer spends for food. One must add to this the farm value of food consumed in restaurants and fast food outlets, or distributed through public and private institutional feeding programs. In total, the farm value of food ingredients amounts to only about 30 percent of aggregate consumer expenditures for food. Imported items account for around 5 percent of the total and marketing costs the rest.

Simple arithmetic makes clear that one cannot have a major impact on the overall rate of inflation or even on retail food costs if action is limited to policies which influence raw product costs. The cost of labor involved in processing, transporting, and distributing food plus the cost of packaging now equals the farm value of food purchased for home consumption. Assume the raw product cost of all food purchased (including that consumed away from home)

Table 2. Where the Consumer's Food Dollar Goes

Type of Food Purchased and Cost of Services		Estimated Cost Per Dollar of Food Expenditure*
Food Purchased for Home Consumption		
Domestically produced food		
Farm value — raw product cost	$.26	
Labor employed in distribution	.21	
Packaging	.05	
Transportation	.03	
Other distribution costs#	.14	
		.69
Imported Food (mainly beverages, bananas and fish)		.05
Food Purchased for Consumption Away From Home		.26
		$1.00

*Based on data for 1978 and estimates for 1979.
#Includes taxes, depreciation on buildings and equipment, or rental costs, utilities, advertising, and profits.

amounts to 30 cents for each dollar spent for food. A ten percent reduction in raw product cost would amount to a reduction of 3 cents for each dollar spent for food which is equivalent to a 3 percent reduction in the food component of the Consumer Price Index. Since the weight of food in the Consumer Price Index is less than 20 percent, this means that reducing farm prices by 10 percent would reduce the overall rate of inflation by less than 1 percent.

Effects of Changes in Farm Price Programs on Consumer Food Costs

The U.S. has a selective price-support program which means that it has legislative authority to raise or maintain the prices of some but not all farm products. No support programs exist at present for poultry, eggs, pork, beef, fruits, and vegetables. Except for beef, sugar and dairy products, import policies have relatively little influence on domestic prices. Most countries in Europe and Japan exercise much more influence over imports and generally maintain farm prices at a much higher level than in the United States.

The principal farm policies now in effect which influence the cost and availability of raw food products are as follows:

(1) Support prices and storage programs for grains

(2) Import restrictions on beef

(3) Support prices for milk and dairy products

(4) Marketing order regulations for milk and a limited number of fruit, vegetable and specialty crops

(5) Support policies for sugar.

A number of these programs are now under attack and for this reason it is important to identify the price-enhancing effect of our existing farm and food policies and how much food costs might be reduced if any one or a combination of these policies were to be eliminated or substantially altered.

The combined effects of the principal programs which serve to support or raise farm prices or raw product costs are shown in Table 3. The way in which these estimates were derived is explained in the following section. There is room for argument regarding each of the figures, but even if one allows for a substantial margin of error, the general order of magnitude of potential savings clearly is relatively small. Eliminating all programs which now serve to enhance farm prices probably would result in savings to consumers of no more than $30 to $35 per person per year, which is equivalent to around 3 percent of current per capita food expenditures. These are strictly short-run effects. The longer-run consequences, taking account of the effect of lower farm prices on supply, probably would be even less.

Table 3. Estimated Effects of Farm Price-Support and Related Programs on Average Per Capita Food Costs, 1978-79

Policy or Program	Per Capita Use	Estimated Price Enhancement#	Effect on Annual Aver. Per Capita Expenditures
	lbs/person	$/lb.	$/person
Price Supports for Grain			
Direct Consumption	140	.01	1.40
Indirect (livestock feed)	1380	.01	13.80
Import Restrictions on Beef	120	.05	6.00
Support Prices for Milk	540	.005	2.70
Marketing Orders			
Class I Differential—fluid milk	240	.01	2.40
Winter Vegetables	10	.05	.50
Sugar Support Program	124*	.05	6.20
Total			33.00

*All sweeteners.
#These are the approximate short-run effects; longer-run effects would probably be less because of the influence of lower prices on supply.

Support Programs for Grains

The principal effect of government supply management, price-support and reserve policies for grains since 1972 has been to reduce fluctuations in grain prices rather than to raise them substantially. During the past eight years, grain prices have fluctuated over a much wider range than they did in the 1960s, but the amplitude of

fluctuations is probably less than would have occurred in the absence of government intervention.

Price-support programs for grains have helped to maintain production which in the long run benefits consumers and enables us to earn additional foreign exchange. The short-run price-enhancing effect of our grain supply-management program has been modest. Gains probably amount to no more than 20 percent, or a maximum of 50 to 60 cents per bushel for wheat and corn. This is equivalent to one cent per pound of raw product. Since per capita consumption of cereal products now amounts to only about 140 pounds per year, the direct cost to consumers of raising grain prices by one cent per pound is $1.40 per person per year.

The indirect effect of raising grain prices on the availability and cost of livestock products is much more important than the direct effect on the cost of bread, cereals and snack foods. We consume indirectly in the form of livestock products nearly 10 times as much grain as we consume directly. This year, we will feed about 138 million metric tons of grain to livestock which is equivalent to nearly 1400 pounds of grain per person. Thus the indirect cost of raising grain prices by the equivalent of one cent per pound is to add around $14 per person per year to the cost of livestock feed ingredients. In the short-run, these costs may not be fully passed on to consumers, but in the longer-run, they will damp down incentives to increase output and hence will lead to smaller supplies and hence higher prices for livestock products.

One of the policy instruments frequently overlooked that could be exercised in such a way as to hold down current grain prices in the United States is the authority to limit exports to the Soviet Union. Under terms of a bilateral agreement negotiated with the Soviet Union in 1975, they must now obtain our permission to purchase more than 8 million tons of grain in any given year. The U.S. has granted Russia the option of purchasing additional grain in each of the past two years; during the current marketing year, because of their short crop,we may permit them to purchase as much as 22 million tons of grain. Domestic grain prices undoubtedly would have been somewhat lower in 1978 and again this year if we had refused to grant this option.

If we had not permitted the additional sales, however, government expenditures for price-support payments would have been higher, and export earnings would have been reduced. Thus, there have been compelling reasons for authorizing additional sales to the USSR although such action probably has contributed modestly to inflation at home. My guess is that the impact of additional sales has been to raise grain prices by about the same order of magnitude as supply management programs, that is 50 to 60 cents per bushel or around one cent per pound of grain.

Import Restrictions on Beef

Voluntary agreements with the major beef export countries, made effective by the threat to impose quotas, have held beef imports in recent years to the equivalent of about 7 percent of total supplies of beef. The amount by which imports might rise in the absence of quotas is frequently exaggerated. We would not be flooded with beef simply because there are no large uncommitted supplies in the principal exporting countries.

An analysis of beef supplies made by Jackson in the early 1970s indicated that in the absence of trade restrictions, beef imports would rise by an amount equivalent to less than 3 percent of total U.S. production. Since the price elasticity of demand for beef at retail appears to lie somewhere between −.6 and −1.0, an unrestricted import policy would depress the retail price of beef no more than 3 to 5 percent, and perhaps even less in the longer run since larger imports would have some adverse effects on incentives to maintain domestic production. The price of hamburger would be depressed more than the price of choice cuts, but the overall effect would be to produce savings to consumers of not more than five cents per pound or $5 to $6 per person per year.

Support Prices for Milk

Prices paid to farmers for manufacturing milk have been supported at around 80 percent of parity since 1973. Price-support purchases in recent years have averaged less than 3 percent of production, and a high proportion of the dairy products purchased were subsequently resold, thus indicating that this level of support has not raised prices substantially above where they would have been in the absence of government intervention. At most, farm prices have been raised 4 to 5 percent above the market-clearing level which is equivalent to about one half cent per pound of milk.

Since per capita use of milk in all forms now amounts to around 540 pounds per year, the annual net gain to consumers of eliminating supports on dairy products would not exceed $2.70 per person. Eliminating import restrictions on cheese and other dairy products might have a somewhat larger short-term effect. However, the long-term consequences would be modest because of the impact of lower prices on domestic production.

Marketing Orders

Marketing orders have come under attack recently both from within the federal bureaucracy (the FTC and the Justice Department) and by consumer organizations. Much of the criticism has been directed against milk marketing orders; however, marketing orders for fruits and vegetables also have been condemned by Houthakker and others.

The fluid or Class I price differential and super-pool premiums are the major targets of criticism of those who oppose marketing orders for milk. Both Class I differentials and super-pool premiums have become less significant in recent years because of the strong demand for cheese and hence higher prices for manufacturing milk. The price which handlers are compelled to pay for fluid milk now averages a little over $2 per hundredweight or two cents per pound above the manufacturing price. Some premium is required to cover the added costs of producing milk which meets fluid health standards, but in the absence of orders the premium would fall. If all milk were sold at the manufacturing price and supplies were to be maintained at their current level, the manufacturing price would have to rise so that returns would equal the current blend or average price in federal order markets. The net effect would be to reduce the fluid price by about $1 per hundredweight or one cent per pound. On a per capita basis, the potential saving amounts to $2.40 per year (240 pounds of fluid consumption per capita x 1¢ per pound).

Marketing orders for fruits and vegetables have had even less influence on prices than milk marketing orders. One of the reasons for this is that such orders apply only to a limited number of fresh fruits and vegetables. Federal marketing orders cannot be used to influence the production or prices of fruits and vegetables sold for processing. Furthermore, the majority of fruit and vegetable orders have been adopted mainly for the purpose of collecting money for advertising or promotion, or to regulate quality, shipping dates, or containers. Few of them have had a significant effect on supply and consequently on prices. Winter tomatoes, celery, onions, and potatoes are the principal vegetables covered by federal marketing orders.

It is extremely difficult to estimate the price effects of fruit and vegetable marketing orders, but the total impact on consumer spending cannot be very large simply because such a small part of fruits and vegetables production is covered by federal marketing orders. Such orders now cover commodities which provide less than 10 percent of the total volume of fresh vegetables consumed each year. This is equivalent to about 10 pounds per person per year. At most, prices have been raised by an average of 5 to 10 cents per pound of raw product. Thus, eliminating vegetable marketing orders probably would save consumers no more than $1 per person per year.

Sugar Support Policies

At present, raw sugar prices in the United States average about six cents per pound above import prices. The differential is maintained by collecting duties on imports. If the U.S. were to eliminate domestic subsidies, it would be necessary to import more sugar. Consequently, world prices for sugar would rise. The floor price established under the recently negotiated international sugar agreement is 11 cents per pound, two to three cents per pound above the

current world price. Thus, if the U.S. were to eliminate import restrictions and duties on sugar, consumers might save as much as four or five cents per pound on the 124 pounds of sweeteners they purchase each year for a total savings of $5 to $6 per person per year.

Holding Down the Cost of Imported Food

The government has even less leverage to influence the cost of imported foods such as coffee, tea, cocoa, fish, and bananas. These items presently account for about 5 percent of what the consumer spends for food. The government might attempt to hold down prices of storable commodities, such as coffee, by accumulating stocks at low prices and making them available in short-crop years, but there is no legislative authority to do so at present. Furthermore, such a program would have to be initiated at a time of world surpluses in order to be successful as an anti-inflation measure.

The only other way in which the government might seek to influence the cost of imported items is to enter into international price-stabilization agreements such as the one recently negotiated for sugar. But such agreements are difficult to negotiate and even more difficult to enforce. Furthermore, exporting countries are interested mainly in using such agreements as an instrument to raise commodity prices, as the OPEC nations have done with oil, rather than to hold down prices. Thus, such agreements are not likely to be an effective instrument to curb inflation.

Holding Down Marketing Costs

Since about two thirds of what the consumer now spends for food goes to pay for processing, transporting, packaging, and distributing commodities supplied by farmers, it is essential to find ways in which marketing costs can be contained if one is to have a significant impact on the rate of inflation in food prices. Labor represents the largest single item in marketing costs, followed by transportation and packaging. About the only way in which these costs can be restrained is through general anti-inflation policies.

Additional savings in marketing costs might be achieved by encouraging more direct marketing of foods, deregulating the trucking industry and limiting mergers or even breaking up firms in markets where competition appears to be weak. Considerable publicity has been given to the study conducted by Mueller and his students regarding the price effects of market concentration in retail food distribution. The sample data to which they had access indicated that retail food prices averaged somewhat higher in metropolitan areas having a high degree of market concentration than in those areas where the four firm concentration ratio was lower.

There may have been other confounding factors which contributed to the results they obtained; nevertheless, this is one area in

which we need additional information. We do not know the magnitude of savings that might be achieved by policies designed to foster competition.

Conclusions

The same kind of political constraints that limit the government's ability to hold down energy costs apply to food as well. There are a number of things which could be done to reduce the prices of individual commodities, such as increasing imports of beef, reducing import duties on sugar, and doing away with the Class I differential for milk. But in total, the effects of these modifications in current policies on food costs are likely to be relatively small.

The principal factors which have contributed to accelerated inflation in raw product prices since 1972 are not subject to government manipulation or control. This includes damage to the coffee crop in Brazil, the turning of the cattle cycle, poor harvests in the Soviet Union and weather-related reductions in the supply of certain fruits and fresh vegetables. There is relatively little the government can do under present legislation to bring down marketing costs as long as general inflation persists.