Price spreads

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Agricultural Marketing Service

SALIENT FEATURES OF RISING MARKETING COSTS

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For my assignment in this afternoon's discussion of "What's Behind Widening Marketing Price Spreads?" the following quotation provides a good starting point:

"The first question that arises is why is it that retail prices have not declined in the same proportion as farm prices, and why is it that the spread between what the producer receives and what the consumer pays has increased so much in the past few years? Evidently the reasons are many and varied, but some of the most important are high freight rates, high wages, and rents and possibly larger profits to the distributors. One of the great problems facing this country today is how can we lower the cost of food to the consumer and increase the price received by the producer, which is now entirely too low."

To one residing in the uncloistered halls of the South Building, USDA, this statement has a most familiar ring -- even though it was made in the year 1922. 1/ Retail prices of food products have declined in the last few years but not in the same proportion as farm prices. The spread between what the producer receives and what the consumer pays has increased. The reasons for this increase in the farm-retail price spread are many and varied and some of the most important are high freight rates, high wages, and possibly larger profits to the distributors and processors of agricultural food products. And not much exposure to the current political campaign is needed to know that one of the "great problems facing this country today" is how we can increase the price received by the producer.

The salient features of rising marketing costs in the last few years and the public concern over them are neither new nor too much different from those of some previous decades. It does not take an exhaustive review of the "literature" to reveal this. "Built-in maid services" provided with food nowadays are not a new feature but they have received increased emphasis in recent years as an explanation for higher costs. More about that later.

1/ J. H. Meek, Director of the Division of Markets, Virginia Department of Agriculture, quoted in the Richmond Times-Dispatch of Feb. 12, 1922.

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We can best examine our subject of rising marketing costs by discussing both trends in unit marketing costs and aggregate marketing costs. Throughout this paper I shall use the term "marketing" in a broad concept, including all activities in getting products from the farm to the consumer in the form, time, and place desired. 2/ The salient features related to longer term trends in rising marketing costs will be considered rather than short-run fluctuations in market price spreads that often do not coincide with actual changes in marketing costs. This paper also is concerned primarily with food products, although many of the conclusions apply equally to marketing nonfood agricultural products.

Trends in Unit Marketing Costs

The Department's "Market-Basket" statistics are the best available measure of changes in per-unit marketing costs. These statistics, which are essentially index-number measurements, compare the retail-store cost of a family market basket of farm food products with the farm value of equivalent quantities of products. The marketing margin -- the difference between the retail cost and farm value -- therefore measures the charges made by marketing agencies for the services associated with a fixed market basket of farm food products bought by consumers in retail food stores.

According to these statistics, the marketing margin (which includes both costs and profits of marketing agencies) has increased markedly over the last decade, with an increase in each year except one. It is now 20 percent higher than in 1950 and more than 70 percent higher than at the end of World War II.

Most of this widening in price spreads during the last decade, however, came during two periods of general price inflation following World War II and during the early part of the Korean conflict. Since 1952, the marketing margin has not risen appreciably -- an average of 1 to 2 percent per year. The farmer's share declined from 47 percent in early 1952 to 38 percent by the end of 1955 (as measured by the market-basket series) mainly because of lower farm prices rather than higher marketing margins. 3/ This is not a new phenomenon. Marketing margins are characteristically less flexible than farm or retail prices.

Labor Costs and Productivity

In looking for an explanation of what has caused the increase in price spreads over the last 5 to 10 years, one quite naturally looks first at the cost of labor, the largest cost item. Trends in unit marketing charges necessarily are influenced to a considerable extent by trends in per-unit labor costs. The labor bill of most processing and distributing agencies

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2/ The rationale of the use of this definition is discussed in "What Is the Marketing Margin for Agricultural Products? A Rejoinder" by Harry C. Trelogan and Kenneth E. Ogren, The Journal of Marketing, Apr. 1956, pp. 403-406, and in other references cited in this article.

3/ The farmer's share rose from 38 percent at the end of 1955 to 41 percent by the middle of 1956 because of increases in both farm and retail prices, illustrating the responsiveness of the farmer's share to changes in price levels.

accounts for one-half or more of their gross margins (difference between raw-material costs and selling price). And prices of many materials and services bought by these firms -- packaging materials, containers, fuel, and even advertising -- are to a large degree labor costs. Labor income is almost 70 percent of our total national income; with the large element of labor services present in distribution, this proportion is likely to be as large or larger in marketing food products.

We can be fairly certain even before examining available statistics that trends in labor cost per unit of product marketed are highly correlated with both trends in hourly earnings and in unit marketing charges. Although the indicator most often used to describe changes in labor costs is hourly earnings, it is obviously inadequate and sometimes misleading. Hourly earnings do not equal the trend in average labor cost per unit if output per hour worked -- that is, productivity -- has changed.

Furthermore, hourly earnings are not the total cost of labor; fringe benefits are becoming increasingly important. Changes in relative amounts of straight time versus overtime also affect trends in the actual labor bill. But a specific measurement of unit labor costs is a herculean task because of the difficulty of measuring output of marketing services and, to a lesser degree, that of estimating a total labor bill. Nevertheless, some tentative conclusions can be made from available data that I believe are both significant and seem consistent with reasonably acceptable or rational hypotheses.

If we start out with our admittedly imperfect measure of labor costs -- hourly earnings -- we find that wages of employees in food processing and distribution now average about a third higher than in 1950 and are more than double the average at the end of World War II. While average hourly earnings have increased in each year over the last decade, the greatest increases in cents per hour as well as percentagewise came during the two inflationary periods of 1946-48 and 1950-51. The smallest percentage increases have occurred since 1953.

Estimates of labor costs per unit of product marketed indicate an increase of less than one-fifth over 1950 and 80 percent since 1945. These increases are considerably less than the wage increases, but they do correspond quite closely to trends in unit marketing charges. It should be noted that these measurements of unit labor cost are likely to have some upward bias because additional services may not be reflected fully in the denominator of our formula. (Unit labor cost is the quotient of the indexes of total cost of labor and of the volume of food products marketed to domestic civilian consumers.) 4/

From 1945 to 1951, it appears that unit labor cost increased slightly faster than unit marketing charges, but since 1951 unit labor cost has tended to increase at the same rate or slower. Also, during the earlier period unit

4/ These statistics are given on p. 7 of Trends in the Cost of Labor in Marketing Farm Food Products, AMS-117, USDA, May 1956. For further description of some of the labor statistics used in this paper see this report and "Labor in the Marketing of Farm Food Products," Agricultural Economics Research, AMS, USDA, Apr. 1955, pp. 42-49.

labor cost increased almost as rapidly as hourly earnings of food marketing employees. Since 1951, however, hourly earnings have increased more than 20 percent while the increase in unit labor cost has been less than 10 percent, with most of that increase between 1951 and 1953.

Although these data are too inexact to be considered conclusive, the inference that output per unit of labor has increased markedly, particularly in the last few years, appears to be consistent with other available data. The steady increase in wage rates has stimulated investments in labor-saving machinery. The cumulative effect of multi-billion-dollar investments in new plant and equipment by marketing firms since World War II is likely being reflected in an expanding rate of productivity during recent years. Since World War II, during which there was little investment in food marketing facilities, about 9 billion dollars in capital outlays have been made by food and beverage processors (according to surveys made by the U. S. Department of Commerce and the Securities and Exchange Commission). Comparable data are not available for the distributive food trades but it is probable that their total investments are not too far behind those of the processors.

The effect of these large investments on the cost structure of corporate business is indicated by the rapid growth of "capital consumption allowances" and the increasing proportion of corporate gross product that they represent. 5/ Between 1946 and 1954, capital consumption allowances (mainly depreciation charges reported in corporate tax returns) almost tripled while employees' compensation increased by only about 90 percent, although, of course, these labor payments still account for the major share of corporate gross product. (It should be noted that these data are for all corporations, not just food marketing firms.)

Census data now available tend to confirm a substantial increase in productivity. The number of employees in food processing reached a peak in 1950 with evidence of a slight decline thereafter despite a continued increase in total food processed. Total man-hours of production workers have declined more than the number of employees. In retail food stores average sales volume increased more than 50 percent between 1948 and 1954, after adjustment for the higher price level. This striking increase in average store volume has undoubtedly brought with it a substantial increase in average volume per retail-store worker.

Two observations on the subject of labor costs as a causal factor in higher marketing costs are appropriate here. First, trends in hourly earnings of food marketing employees closely parallel the general trend in other industries. For the most part, food industries follow the pattern laid down by "pace-setting" groups; this is especially true of the retail trade, which employs the largest percentage of food marketing workers.

The other observation concerns the effect on farm prices of higher labor costs in marketing versus the effect of higher labor income on increasing the demand for farm products. It is likely that a sizable part of the increase in farm-retail price spreads over the last 5 to 10 years is attributable to higher labor costs. However, the overall rise in wage rates

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5/ "Corporate Profits Since World War II," Survey of Current Business, U. S. Dept. Commerce, Jan. 1956, pp. 8-20.

of all labor during this period has been reflected in a much larger increase in the total purchasing power of labor. To what extent these forces are countervailing ones is almost impossible to determine.

Other Cost Factors and Profits

Transportation has been discussed this afternoon. The rather substantial increase in rates over the last decade also has been a definite factor in the increasing marketing margin, especially for perishable products shipped long distances. Higher transportation charges are not unrelated to the general rise in labor costs, as the labor bill is a large part of the total costs of transportation agencies. As is true for labor, transportation rates are not necessarily the real measure of actual changes in transportation costs.

We might speculate on several other cost factors that are probably contributing to higher unit marketing charges, although as a proportion of total costs they are not likely to be too significant. Among these are State and local property taxes and other fees and licenses of all kinds. Others may include advertising expenditures and promotional gimmicks such as coupons and trading stamps.

Profits are another item that must be considered in our discussion, because the spotlight is so often focused on them. Generally, less than 5 percent of total marketing margins is taken up by corporate profits after deduction for income taxes. Because they are a residual item, they are the most variable item in the whole picture. The fact that profits this year for a firm or group of firms are double last year's rate may not be too significant if last year's rate was 50 percent below the average for the preceding 5 years. Moreover, any conclusions about trends in profits per dollar of sales are not value judgments *per se* about the profitability of these firms. Even though its profit per dollar of sales may be less than 1 percent, a firm with a large volume of business and a rapid turnover may yield a handsome dividend rate and capital gains to stockholders in addition to generous salaries and bonuses to executives. However, returns on stockholders' equity in food trades generally are relatively modest in comparison with other industries. The essential feature of profits as they relate to our topic this afternoon is that profits apparently have not been a major factor in the widening price spread over the last 10 years. 6/

Marketing Services Versus Marketing Costs

Now for what seems to many observers a popular explanation for rising marketing costs -- the built-in maid services that housewives are buying with their food nowadays. As a factor in increasing the unit marketing charges which we have been discussing thus far, these added services necessarily are of minor importance. The market-basket series is designed to measure trends in the charges for a fixed quantity of marketing services and does not reflect to any marked degree changes in marketing services

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6/ For a further discussion of profits in food marketing see "Trends in Corporate Profits in Marketing Farm Food Products," *The Marketing and Transportation Situation*, July 1956, pp. 9-23.

or types and quantities of foods bought by consumers. 7/ True enough, there has been a gradual upgrading of many foods included in this market basket, and any increases in costs associated with such additional services as washing and prepackaging fresh fruits and vegetables, slicing and vitamin enrichment of bread, or even the cowboy cutouts for the kiddies on the cornflakes packages would be reflected in the marketing margin of the market basket. Not measured are the effects of consumers buying more processed, ready-prepared, and convenience foods such as TV dinners and chicken potpies.

These added marketing services obviously cannot be ignored in any analysis of trends in aggregate marketing costs. In addition to the many built-in maid services bought with foods in supermarkets, consumers now have more of their meals served to them in restaurants than before World War II. Also, a larger proportion of our food goes through the marketing system; fewer people live on farms where a large part of the food supply is obtained from their own production.

The total costs for marketing farm food products in 1955 are estimated at over 32 billion dollars, up from 18 billion dollars in 1946 and 9 billion dollars in 1940. 8/ After allowance is made for the rise in unit marketing costs and the increased volume of food handled, a surprisingly small part of the total increase is left as a residual. Of the 23-billion-dollar increase between 1940 and 1955, all but 6 billion is accounted for by higher unit costs and larger volume. 9/ Comparisons based on periods since 1946 indicate an even smaller proportion of the total rise unexplained by cost and volume.

Several factors seemingly account for this. Many of the processed and prepared foods on today's grocery shelves cost little if any more than the same food in a less highly processed form. Apparently the savings in costly transportation and storage of highly perishable products and, in some instances, substantial economies resulting from new technology have offset any cost of added processing for many products. Furthermore, the modern housewife is still price conscious to the extent that the convenience foods that give her the best bargain are the ones that have set the best sales record. Many of the frozen fruits, vegetables, and juices, as well as cake mixes and cut-up, ready-to-cook chicken, are examples of these "low-cost" processed foods with high sales volume.

7/ New products are added to the market basket and weights for individual products are changed periodically to keep the market basket representative of current food purchase patterns. Whenever these weights or the specifications of the products priced are changed, prices for adjacent time periods are "linked" together as in the procedure used in the Bureau of Labor Statistics Consumer Price Index. Further details concerning the calculation of these statistics are given in "Price Spreads for Farm Food Products, Revised Series, 1046 to Date" in the Supplement for July-Sept. 1953 of The Marketing and Transportation Situation.

8/ "The Farmer's Share: Three Measurements," Agricultural Economics Research, Apr. 1956, table 3.

9/ Marketing Costs for Food, USDA Misc. Pub. 708, Dec. 1955, p. 11.

Closely related to the preceding argument is the proposition that the exotic convenience foods are only a small part of the average housewife's food budget. These processed foods in the more costly forms have not made great inroads on the so-called staples like milk, bread, meat, eggs, and others which make up a major part of most household food budgets. Moreover, many processed products such as canned fruits and vegetables, bread, crackers, and other bakery products are not new shopping items to most housewives.

An increase in proportion of meals eaten out pushes the total marketing bill up faster than any other shift in marketing services or channels, because one-half or more of the food cost is for personal services of meal preparation and serving. During World War II, meals eaten out increased sharply but in 1955 purchased meals and beverages accounted for about the same proportion of food expenditures as in 1946, so that meals eaten out have been less of a factor in higher marketing costs in recent years.

Another factor tending to offset added costs of more marketing services is the increasing importance of meats and animal products in the consumer's diet relative to cereal products and potatoes. What this means is that while more marketing services are being provided with most individual food products, consumers have shifted their purchases to product groups for which marketing resource use is relatively low and farm resource use is high. For example, the volume of poultry and eggs (weighted by 1947-49 average prices received by farmers) marketed for domestic civilian consumption in 1955 was 40 percent higher than in 1946 while the volume of grains used for food products did not increase any over the last decade (reflecting an actual per capita decline). 10/ The red meats as well as the poultry and eggs group have increased at the expense of the grains and fruits and vegetables groups. On the average, the farmer's share of the consumer's dollar going for the two meat-product groups is about twice that of the other two groups. (The farmer's share is a rough measure of the relative balance between farm and marketing resources used in various products.) Or, measured in another manner, the average per pound value of farm food marketings at 1947-49 prices has increased about 10 percent between 1946 and 1955 because of the shifts to higher farm resource products. 11/

10/ These statistics are based on an unpublished Agr. Market. Serv. index. Farm food marketings equivalent to domestic civilian consumption of foods (after deduction of volume of foods consumed where produced and nonfood by-product uses) were weighted by 1947-49 average prices received by farmers. This index gives the best measure of the changes in volume of inputs of farm food products into the marketing system. The trend of this index is roughly similar to the food component of the AMS index of volume of farm marketing or the AMS index of per capita food consumption multiplied by an index of civilian population. The former index does not take account of changes in stocks, exports, and nonfood uses while the latter index includes imported foods as well as home-produced foods.

11/ To obtain this measurement, weighted aggregates computed for the index described in footnote 10 were divided by the total pounds of farm food products equivalent to civilian consumption from marketings of domestically produced foods.

Overall Conclusions

What does this all add up to? Marketing costs on a unit basis have increased only moderately in recent years, following large increases in two earlier inflationary periods. It is only when the trend in marketing costs is contrasted with recent trends in farm prices that the record may appear bad. The largest component of marketing costs -- unit labor costs -- likewise has shown only moderate increases in the last few years. Consumers are receiving more and more services with their food purchases, but for various reasons the cost of these added services does not appear to be a major factor in rising marketing costs. Not the least of these reasons is the increasing efficiency and productivity of the marketing system, which has made possible more services for given inputs.

Marketing costs are likely to continue their steady rise of recent years. Consumers seen able and willing to pay for still more services with their food and economic forecasters do not foresee any prolonged deflation that would reverse the upward trend in costs and prices.

If there is any moral to be drawn, it may be that we should emphasize the tremendous progress that has been made and is being made in the job of processing and distributing food products. The age of specialization has increased the tasks performed by the marketing system in getting food on the consumer's table relative to those done by farmers and housewives. Therefore, the general proposition that marketing and marketing costs take a larger and larger share of the food dollar is not inconsistent with progress in a changing and expanding economy.