## U. S. FOOD INDUSTRY COSTS AND MARGINS

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## INTRODUCTION

The purpose of this paper is to examine food expenditures as payments to food providers - retailers, processors, farmers, for example - and to see the distribution by providers of these payments among the several items that constitute their own business costs. Meatpacking is used to illustrate processor activities. Figures are designed for projection on a screen.

## OVERVIEN

U.S. consumers annually spend a substantial share of their income for food. Most of this food is purchased in grocery stores, but a rising portion of it is consumed away from home. According to U.S. Department of Agriculture (USDA) estimates, consumer expenditures for food in 1991 totalled nearly $\$ 500$ billion, accounting for about 11.6 percent of disposable income. See Table 1. Table footnotes provide useful details.

The food and fiber industry is a major sector of the national economy. According to the USDA, the industry accounted for 16.6 percent of total U.S. employment, and contributed 15.4 percent of gross national product (GNP) in 1991 (Statistical Abstract).

[^0]Table 1: Food Expenditures by Families and Individuals as a Share of Disposable Income, United States, Selected Years, 1950-1991.

> (billions of current dollars)

| Year | Disposable Personal Income | Expenditures for Food |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | At home ${ }^{1}$ |  | Away from home ${ }^{2}$ |  | Total ${ }^{3}$ |  |
|  |  | Amount | Percent | Amount | Percent | Amount | Pct. |
| 1950 | 207.7 | - | - | - | - | 51.5 | 24.8 |
| 1955 | 274.4 | - | - | - | - | 62.8 | 22.9 |
| 1960 | 352.0 | 56.2 | 16.0 | 14.2 | 4.0 | 70.5 | 20.0 |
| 1965 | 475.8 | 66.8 | 14.0 | 19.0 | 4.0 | 85.8 | 18.0 |
| 1970 | 722.0 | 74.2 | 10.3 | 26.4 | 3.7 | 100.6 | 13.9 |
| 1975 | 1,150.9 | 115.1 | 10.0 | 45.9 | 4.0 | 161.0 | 14.0 |
| 1980 | 1,952.9 | 178.5 | 9.1 | 85.4 | 4.4 | 263.9 | 13.5 |
| 1985 | 1,943.0 | 228.4 | 7.8 | 129.5 | 4.4 | 357.9 | 12.2 |
| 1990 | 4,058.8 | 297.3 | 7.3 | 177.3 | 4.4 | 474.6 | 11.7 |
| 1991 | 4,217.9 | 304.6 | 7.2 | 182.9 | 4.3 | 487.5 | 11.6 |

[^1]The food industry is vigorous and growing, its growth fueled over the years by at least three continuing changes. First among these is population growth - about 100 milli ion people during 1950-1991. Second is the rise in disposable personal income (DPI) that is apparent in Table 1. (Constant dollar DPI increased about $3.5 x$ during 1950-1991, rather than the $20.3 x$ shown in current dollars.) Third is the rise in two-income households and/or women in the work force. As more householders find outside employment, household incomes rise and time spent at home declines. This affects food consumption patterns as well as expenditures. Notice in Table l that, although expenditures rise, they are a declining share of rising income, especially for food consumed at home. Increased expenditures are mostly for food consumed away from home and for food preparations that are quicker and easier to serve at home. So the increase in food expenditures is for services as part of the food package as well as for the food itself, whether it is consumed at home or away from home.

## THE MARKETING BILL

The USDA maintains a continuing record of the total farm value of all foods produced by U.S. farmers and the total retail value of consumer expenditures for these same foods. The USDA calls the difference between these two values the Marketing Bill. A primary product of this record is the relative shares of consumer expenditures that go to farmers and to the marketing system (see Table 2 and footnotes). The data include consumer expenditures for domestically produced foods consumed at home and away from home, but imported foods (like coffee, cocoa, or bananas, for example) are excluded because they would distort the U.S.farm share calculation (By contrast, the consumer expenditure estimates in Table 1 are for all foods, including imports.) The

Table 2: ALL FOODS: Marketing Bill and Farm Value Components of Consumer Expenditures for Domestically Produced Farm Foods, United States, Selected Years, 1950-1991.

| Year | Consumer Expenditures |  |  | Market ing Bill | Farm Value | Farm Value Share of Expenditures |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | At Home ${ }^{1}$ | Away From Home ${ }^{2}$ |  |  |  |
|  | - . . - billions of current dollars - . . - |  |  |  |  | Percent |
| 1950 | 44.0 | -- | -- | 26.0 | 18.0 | 41 |
| 1955 | 53.1 | -- | -- | 34.4 | 18.7 | 35 |
| 1960 | 66.9 | -- | -- | 44.6 | 22.3 | 33 |
| 1965 | 81.1 | 60.2 | 20.9 | 54.0 | 27.1 | 33 |
| 1970 | 110.6 | 78.2 | 32.4 | 75.1 | 35.5 | 32 |
| 1975 | 167.0 | 116.2 | 50.8 | 111.4 | 55.6 | 33 |
| 1980 | 264.4 | 180.1 | 84.3 | 182.7 | 81.7 | 31 |
| 1985 | 345.4 | 220.8 | 124.6 | 259.0 | 86.4 | 25 |
| 1986 | 359.6 | 226.0 | 133.6 | 270.8 | 88.8 | 25 |
| 1987 | 375.5 | 230.2 | 145.3 | 285.1 | 90.4 | 24 |
| 1988 | 398.8 | 242.1 | 156.7 | 301.9 | 96.8 | 24 |
| 1989 | 419.4 | 255.5 | 163.9 | 315.6 | 103.8 | 25 |
| 1990 | 449.8 | 276.2 | 173.6 | 343.6 | 106.2 | 24 |
| $1991{ }^{3}$ | 461.8 | 281.4 | 180.4 | 360.6 | 101.2 | 22 |

[^2]marketing bill appears as column 4 in Table 2. The farmer share is in the last column. Notice that the farm share declines over time. This is because an increasing share of retail value is a product of the marketing system (convenience, for example) rather than of farm production. The share varies widely from product to product, of course, depending upon how much preparation the farm product requires (fresh eggs versus bread from grain, for example.)

Table 3 itemizes ten major cost categories in the marketing bill. They are presented as percentages to facilitate comparison over time as the marketing bill grows. Each column adds to 100 percent but the total in the bottom row is shown in current dollars. The 1991 total marketing bill in Table 2 appears in the bottom right corner of Table 3.

Several aspects of Table 3 warrant highlighting. First, the cost components are more remarkable for their similarity over time than for any big changes. Second is the great importance of labor and the modest importance of profit. Third is the persistent growth of the bottom row where totals record the effects of inflation and the rise in population, income, and economic activity. Finally, it is worth recognizing that none of these costs are related to the cost of the farm products themselves. Farm prices can rise or fall without affecting wages, rents or other operating costs in the marketing system. We will return to this later.

Figure 1 provides a graphic summary of the 1991 costs from Tables 2 and 3. Notice, however, that the farm share is included in Figure 1, and that the cost components therefore are calculated as percentages of total consumer expenditures rather than as percentages of just the marketing bill. Each dollar spent for food makes payments to these costs, although portions may vary somewhat depending on the food item and the place where it is bought.

Table 3: Percentage Distribution of Food Marketing Bill, United States, Selected Years, 1960-1991.

| Cost Component | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984 | 1988 | 1990 | 1991 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Labor | 44.2 | 42.0 | 44.0 | 48.3 | 51.0 | 44.1 | 45.2 | 46.0 | 46.0 | 44.8 |
| Packaging Materials | 12.1 | 11.4 | 12.3 | 12.1 | 13.0 | 11.8 | 11.0 | 10.7 | 10.5 | 10.9 |
| Intercity Transportation | 9.2 | 8.2 | 7.0 | 7.8 | 8.0 | 7.4 | 6.8 | 6.0 | 5.9 | 5.8 |
| Depreciation | 3.4 | 3.6 | 3.3 | 3.6 | 3.0 |  | $6.4^{3}$ | 5.5 | 6.0 | 5.9 |
| Rent (net) | 2.5 | 2.9 | 3.1 | 3.2 | 3.0 |  | 5.8 |  |  |  |
| Advertising | 2.9 | 3.2 | 2.8 | 2.8 | 3.0 | $2.8^{3}$ | 3.4 | 6.0 | 5.3 | 5.1 |
| Repairs | 1.6 | 1.9 | 1.9 | 2.2 |  | $2.1^{3}$ | 1.4 | 2.0 | 2.0 | 1.9 |
| Interest (net) | 0.4 | 0.6 | 1.3 | 1.5 | 4.0 | $2.1^{3}$ | 2.7 | 2.7 | 3.9 | 3.8 |
| Other costs ${ }^{1}$ | 19.0 | 20.9 | 18.6 | 14.0 | 9.0 | 17.6 | 17.1 | 12.7 | 12.5 | 12.8 |
| Before-tax profits ${ }^{2}$ | 4.7 | 5.3 | 5.6 | 4.5 | 6.0 | 5.9 | 6.8 | 4.0 | 3.9 | 4.5 |

[^3]FIGURE 1. ALL FOODS: A PERCENTAGE DISTRIBUTION OF THE CONSUMERS FOOD DOLLAR AS PAYMENT TO FOOD COSTS, UNITED STATES, 1991


1/ See Table 3 footnotes.
SOURCE: DERIVED FROM TABLES 2 AND 3.

Labor will be higher when a filet is served with wine and candlelight in a downtown restaurant. The farm share is higher when you make a salad in your kitchen.

## EXAMPLES FROM BEEF AND PORK

Marketing bill costs are borne by each business and industry at all levels of the marketing system. Table 4 provides an overview of farm-towholesale and wholesale-to-retail costs for pork and Choice beef. The farm share of retail value for these two products appears in the right column. Here again it is apparent that farm share is related to the amount of processing required to prepare a final product. Given that most Choice beef is consumed fresh and most pork is consumed smoked, cured, cooked or canned, it is not surprising that the comparative marketing bill for pork is higher than for beef.

Tables 5 and 6 offer a different perspective on these costs for pork and beef. Whereas Table 3 presented the marketing bill in accounting cost categories such as labor, depreciation, or repairs, Table 5 shows costs related to particular categories of work that need to be done. Notice in Table 5 that the farm values and the retail prices are the same as those in Table 4, but in between the farm and retail price are some categories of tasks that account for the price spreads that appeared in Table 4. Table 6 converts Table 5 to percentages so that comparisons over time are easy to make (Notice that the farm share percentages are the same as in Table 4). Figure 2 provides a graphic illustration. Slaughter and processing, as expected, are more costly for pork than for beef. Merchandising, which is mostly retailing, is a major cost component. We examine these two tasks now.

Table 4: CHOICE BEEF AND PORK: Retail Price, Farm Value, Price Spreads, and the Farm Value Share of Retail Price, United States, Selected Years, 1980-1991.

|  | Retail <br> Price ${ }^{1}$ | Wholesale Value ${ }^{2}$ | Net Farm Value ${ }^{3}$ | $\begin{aligned} & \text { Farm } \\ & \text { to } \\ & \text { Retail } \end{aligned}$ | Whole- <br> sale <br> to <br> Retail ${ }^{4}$ | Farm to Wholesale ${ }^{5}$ | Farm Value Share ${ }^{6}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | . .-. .-. Cents per retail pound ........ |  |  |  |  |  | Percent |
| Choice Beef: |  |  |  |  |  |  |  |
| 1980 | 233.6 | 171.1 | 145.7 | 87.9 | 62.5 | 25.4 | 62 |
| 1985 | 228.6 | 148.8 | 127.4 | 101.2 | 79.8 | 21.4 | 56 |
| 1986 | 226.8 | 146.5 | 125.0 | 101.8 | 80.3 | 21.5 | 55 |
| 1987 | 238.4 | 160.0 | 138.7 | 99.7 | 78.4 | 21.3 | 58 |
| 1988 | 250.3 | 169.4 | 148.3 | 102.0 | 80.9 | 21.1 | 59 |
| 1989 | 265.7 | 176.8 | 157.6 | 108.1 | 88.9 | 19.2 | 59 |
| 1990 | 281.0 | 189.6 | 168.4 | 112.6 | 91.4 | 21.2 | 60 |
| 1991 | 288.3 | 182.5 | 160.2 | 128.1 | 105.8 | 22.3 | 56 |
| Pork: |  |  |  |  |  |  |  |
| 1980 | 139.4 | 98.0 | 63.2 | 76.2 | 41.4 | 34.8 | 45 |
| 1985 | 162.0 | 101.1 | 71.4 | 90.6 | 60.9 | 29.7 | 44 |
| 1986 | 178.4 | 110.9 | 82.4 | 96.0 | 67.5 | 28.5 | 46 |
| 1987 | 188.4 | 113.0 | 82.7 | 105.7 | 75.4 | 30.3 | 44 |
| 1988 | 183.4 | 101.0 | 69.4 | 114.0 | 82.4 | 31.6 | 38 |
| 1989 | 182.9 | 99.2 | 70.4 | 112.5 | 83.7 | 28.8 | 38 |
| 1990 | 212.6 | 118.3 | 87.2 | 125.4 | 94.3 | 31.1 | 41 |
| 1991 | 211.9 | 108.9 | 78.4 | 133.5 | 103.0 | 30.5 | 37 |

[^4]Source: Dunham, Denis, Food Cost Review, 1991, AER 662, ERS, USDA, August, 1992.

Table 5: CHOICE BEEF AND PORK: Farm Value, Marketing Costs by Function, and Retail Price, United States, Selected Years, 1980-1991.

| Item | 1980 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cents per retail pound |  |  |  |  |  |  |  |
| Beef: |  |  |  |  |  |  |  |  |
| Farm value | 145.0 | 127.4 | 125.0 | 138.7 | 148.3 | 157.6 | 168.4 | 160.2 |
| Slaughtering and boxing carcass | $16.2^{1}$ | 17.5 | 17.7 | 17.5 | 17.4 | 15.5 | 17.4 | 18.5 |
| Intercity transportation | 3.7 | 3.9 | 3.8 | 3.8 | 3.7 | 3.7 | 3.8 | 3.8 |
| Warehousing and store delivery | 14.8 | 15.0 | 14.9 | 15.7 | 16.5 | 17.5 | 18.5 | 19.0 |
| Cutting and merchandising | 57.9 | 64.8 | 65.4 | 62.7 | 64.4 | 71.4 | 72.9 | 86.8 |
| Retail price | 237.6 | 228.6 | 226.8 | 238.4 | 250.3 | 265.7 | 281.0 | 288.3 |


| Pork: |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |  |  |
| Farm value | 63.2 | 71.4 | 82.4 | 82.7 | 69.4 | 70.4 | 87.2 | 78.4 |
| Slaughtering and processing | 31.5 | 26.1 | 25.0 | 26.8 | 28.2 | 25.4 | 27.6 | 27.0 |
| Intercity transportation | 3.4 | 3.6 | 3.5 | 3.5 | 3.4 | 3.4 | 3.5 | 3.5 |
| Wrehousing and store |  | 8.9 | 10.7 | 11.7 | 12.4 | 12.1 | 12.0 | 14.0 |
| delivery | 13.9 |  |  |  |  |  |  |  |
| Cutting and merchandising | 32.5 | 50.2 | 55.8 | 63.0 | 70.3 | 71.7 | 80.3 | 89.1 |
|  |  |  |  |  |  |  |  |  |
| Retail price | 139.5 | 162.0 | 178.4 | 188.4 | 183.4 | 182.9 | 212.6 | 211.9 |

${ }^{1}$ Shown originally as 6.8 slaughtering and 9.4 breaking.
Source: Dunham, Denis, Food Cost Review, AER 537 and AER 662, ERS, USDA, July, 1985, and August, 1992.

Table 6: CHOICE BEEF AND PORK: Percentage Distribution of Farm Value and Marketing Costs by Function as a Percent of Retail Price, United States, Selected Years, 1980-1991.

| Item | 1980 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Percent of retail price

Beef:

| Farm value | 61.0 | 55.7 | 55.1 | 58.2 | 59.2 | 59.3 | 55.9 | 55.6 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Slaughtering and boxing | 6.9 | 7.7 | 7.8 | 7.3 | 7.0 | 5.8 | 6.2 | 6.4 |
| carcass | 1.6 | 1.7 | 1.7 | 1.6 | 1.5 | 1.4 | 1.4 | 1.3 |
| Intercity transportation <br> Warehousing and store <br> delivery | 6.2 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| Cutting and merchandising | 24.3 | 28.3 | 28.8 | 26.3 | 25.7 | 26.9 | 25.9 | 30.1 |
|  |  |  |  |  |  |  |  |  |
| Retail price |  |  |  |  |  |  |  |  |

Pork:

| Farm value | 45.3 | 44.1 | 46.2 | 43.9 | 37.8 | 38.4 | 41.0 | 37.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Slaughtering and processing | 22.6 | 16.1 | 14.0 | 14.2 | 15.4 | 13.9 | 13.0 | 12.7 |
| Intercity transportation | 2.4 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 1.6 | 1.7 |
| Warehousing and store delivery | 6.4 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| Cutting and merchandising | 23.3 | 31.0 | 31.2 | 33.4 | 38.3 | 39.2 | 37.8 | 42.0 |
| Retail price ${ }^{1}$ | 139.5 | 162.0 | 178.4 | 188.4 | 183.4 | 182.9 | 212.6 | 211.9 |

1 Cents per retail pound.
Source: Derived from Table 5.

FIGURE 2. BEEF AND PORK: PERCENTAGE DISTRIBUTION OF CONSUMERS DOLLAR SPENT FOR BEEF AND PORK, UNITED STATES, 1991


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SOURCE: TABLE }6
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## THE MEATPACKING INDUSTRY

Table 7 and Figure 3 illustrate operating costs in the meatpacking industry. Notice how the accounting has been presented for the industry by the trade association that prepared the information. Gross operating margin is total sales minus cost of goods sold (in this case livestock or meat). The operating margin is the cost of adding product value. Several useful observations about the meatpacking industry can be drawn from Table 7. First, the largest single component of industry cost is the cost of buying livestock or meat. Then come the operating costs that define the industry. Second, it is apparent that processing is more complex and costly than is slaughter, but it is also better rewarded. Notice that gross margins and earnings rise together, starting with cattle packers (who do the least processing) and moving through hog packers (who do more processing) to nonslaughtering processors in the right column. Third, labor is the largest single component of the operating margin. Fourth, the limited evidence here suggests again that margins appear to be rather stable, not changing much over time. Fifth, net earnings (as a share of sales) are not a major component of operating costs. GROCERY RETAILING

Table 8 and Figure 4 provide a breakdown of operating costs among grocery supermarkets in years that match those shown for meatpacking in Table 7. Again, several observations are worth highlighting. First, gross margins are notably stable over time. Second, margins did widen somewhat during this period, but not as much as the increase in labor costs because there were offsetting cost reductions elsewhere. Third, labor accounted for at least half the operating margin in all three time periods; no other cost component was

Table 7: Percentage Distribution of Packing Industry Sales Dollar, by Operating Category, United States, 1979 and 1987.

| Item | CATTLE PACKERS |  | HOG PACKERS |  | $\frac{\text { PROCESSORS }^{\top}}{1987}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1979 | 1987 | 1979 | 1987 |  |
| Total Sales | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Less Livestock (or meat) purchased | d 87.9 | 90.3 | 71.1 | 69.9 | 63.8 |
| Gross margin | 12.1 | 9.7 | 28.9 | 30.1 | 36.2 |
| Operating Expenses: |  |  |  |  |  |
| Wages \& Salaries | 4.4 | 3.6 | 10.1 | 9.1 | 9.8 |
| Benefits: |  |  |  |  |  |
| Insurance | 0.1 | 0.4 | 0.9 | 1.2 | 1.1 |
| Other ${ }^{3}$ | $0.2$ | $0.2$ | $1.0$ | $0.6$ | $0.5$ |
| Total Benefits | 0.9 | 0.9 | 3.3 | 2.8 | 2.7 |
| Interest | 0.2 | 0.2 | 0.4 | 0.3 | 0.3 |
| Depreciation | 0.4 | 0.4 | 0.8 | 1.0 | 1.3 |
| Rents | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 |
| Taxes (including income taxes) | 0.7 | 0.2 | 0.2 | 1.3 | 1.5 |
| Supplies \& Containers | 2.7 | 1.5 | 4.5 | 5.5 | 7.7 |
| A11 Other Expenses | 1.9. | 2.6 | 7.7 | 8.2 | 9.8 |
| Total Expenses | 11.3 | 9.5 | 27.3 | 28.6 | 33.6 |
| Net Earnings | 0.8 | 0.2 | 1.6 | 1.5 | 2.6 |

1 Do not slaughter livestock and are involved primarily in the manufacture and sale of processed meat.
${ }^{2}$ Taxes, social security, retirement.
3 Includes vacation.
Source: Derived from Meat Facts, 1982 and 1989, American Meat Institute, P.0. Box 3556, Washington, D.C. 20007.

FIGURE 3. BEEF AND PORK: PERCENTAGE DISTRIBUTION OF GROSS OPERATING MARGINS IN THE MEATPACKING INDUSTRY, UNITED STATES, 1987


SOURCE: DERIVED FROM TABLE 7.
comparable although insurance, licenses, and taxes were the second largest cost category (Figure 4). Fourth, sales per store (and store size) grew rapidly during 1969-1987 (bottom row). Fifth, chain grocery earnings came from collateral sources in addition to operating profit, but net earnings from all sources were a modest share of total sales. Finally, table footnotes offer useful insights.

## SOME OBSERVATIONS

Margin Stickiness - The tendency for margins to display a certain stability over time, particularly in relation to the cost or value of the inventory, is normal. Some observers refer to this stability as 'stickiness.' Just as the householder's paycheck is, for the present, fixed, or the monthly rent or mortgage or household utility bills, so also are business operating costs fixed, for the present. Neither in the householder's case or in the firm's case are these monthly operating commitments affected by the price of food inventories being processed through these homes and businesses.

Stickiness and the Farm Share - Prices are a consequence of buyers competing with each other for available supplies. When we hear on the evening news that frost has severely damaged the Florida orange crop we know that we can expect higher prices for juice and oranges. Experience has also taught us that prices are lower when products are abundant. Suppose that, on the average, producers get 50 percent of the retail price for a product, say beef, as in Figure 2. Then, suppose that cattle numbers depart widely from customary availability, and farm and retail prices either rise or fall. If the marketing margin is a sticky 50 cents, then the farm share will vary widely as retail beef prices reflect the uncommon scarcity or abundance. If consumers now pay only 80 cents, say, or $\$ 1.20$, where formerly they paid a dollar, the

Table 8: Percentage Distribution of Retail Grocery Chainstore Sales Dollar, United States, Selected Years, 1969-1987.

| Item | $\begin{aligned} & 1969-1970 \\ & (53 \text { firms) } \end{aligned}$ | $\begin{aligned} & 1979-1980 \\ & (55 \text { firms) } \end{aligned}$ | $\begin{aligned} & 1986-1987 \\ & (32 \text { firms) } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Total Sales | 100.00 | 100.00 | 100.00 |
| Cost of Goods Sold | 78.69 | 78.29 | 75.67 |
| Gross Margin | 21.31 | 21.71 | 24.33 |
| Operating Expenses: |  |  |  |
| Payroll ${ }^{\text {Supplies }}{ }^{2}$ | 10.65 | 12.39 | 12.67 |
| Supplies ${ }^{\text {U }}$ | 0.92 | 1.06 1.04 | 0.88 1.24 |
| Communications ${ }^{3}$ | 0.07 | 0.07 | 0.08 |
| Trave1 | 0.11 | 0.09 | 0.07 |
| Services Purchased ${ }^{4}$ | 1.36 | 1.20 | 1.36 |
| Promotional Activitiess ${ }^{5}$ | 1.43 | 0.35 | 0.58 |
| Professional Services | 0.05 | 0.07 | 0.09 |
| Donations | 0.02 | 0.01 | 0.02 |
| Insurance | 0.55 | 0.85 | 1.10 |
| Taxes, licenses | 0.94 | 0.93 | 1.19 |
| Property Rentals | 1.52 | 1.18 | 1.11 |
| Equipment Rentals | 0.10 | 0.14 | 0.22 |
| Depreciation and Amortization | 0.82 | 0.79 | 1.08 |
| Repairs | 0.52 | 0.59 | 0.63 |
| Interest | 0.69 | 0.15 | 0.18 |
| Unclassified Credits and Allowances ${ }^{7}$ | 0.63 $(-0.22)$ | 1.09 $(-1.00)$ | 0.86 $(-0.96)$ |
| Total Expenses | 20.87 | 20.99 | 22.41 |
| Net Operating Profit | 0.45 | 0.73 | 1.93 |
| Net Other Income ${ }^{8}$ | 1.41 | 0.66 | 0.76 |
| Total Net Income Before Tax | 1.86 | 1.39 | 2.69 |
| Income Tax | 0.94 | 0.59 | 1.24 |
| Total Net Earnings | 0.92 | 0.80 | 1.45 |
| Sales per Store (\$ million) | \$2.03 | \$5.86 | \$11.58 |
| ${ }^{1}$ Including all benefits. ${ }^{2}$ Containers, wrappings, and store maintenance such |  |  |  |
| as register tapes, cleaning supplies, and employee uniforms. communication costs, e.g., teletype, telephone, postage. For example |  |  |  |
|  |  |  |  |
| advertising, hauling. iaundry, pest control, deftective, clerical. Mostly |  |  |  |
| trading stamps, tape ${ }_{7}$ premiums, coupons, etc. ${ }^{\text {c }}$, such as attorneys, accoun- |  |  |  |
| tants, architects. An internal bookkeeping refinement, but includes |  |  |  |
|  |  |  |  |
| discounts for prompt payment and miscellaneous income, including any profit or |  |  |  |
| loss on real estate. |  |  |  |

Source: Derived from selected issues of Operating Results of Food Chains, Cornell University, Ithaca, NY, last published in 1987.

FIGURE 4. PERCENTAGE DISTRIBUTION OF RETAIL CHAINSTORE GROSS OPERATING MARGIN,
UNITED STATES, $1986-1987$

GROSS MARGIN (24.33 PCT.)

PER DOLLAR OF MARGIN:

$52.1 \%$ - LABOR (PAYROLL \& BENEFITS)

3.6\% - SUPPLIES
$5.4 \%$ - UTILITIES 1/
$7.0 \%$ - DEPRECIATION, REPAIR
$5.5 \%$ - RENTALS
$6.0 \%$ - ALL PURCHASED SERVICES
$0.7 \%$ - INTEREST
$9.4 \%$ - INSURANCE, LICENSES, LOCAL TAXES
$3.6 \%$ - INCOME TAX 2/
$2.4 \% ~-~ A L L ~ O T H E R ~$
$4.5 \% ~-~ N E T ~ O P E R A T I N G ~ P R O F I T ~$

1/ INCLUDING COMMUNICATIONS. 2/ APPORTIONED ESTIMATE SOURCE: DERIVED FROM TABLE 8.
farm share would swing between 37.5 percent ( $80 \phi$ retail - $50 \phi$ margin $=30 \phi$ farm share $\div 80 \phi=.375$ ) and 58.3 percent ( $\$ 1.20-50 \phi=70 \phi \div 1.20=.583$ ).

Farm Share and Farm Profitability - Producers, seeing this relationship, and sensitized by low prices and low or absent profits, might equate unprofitability directly with low farm shares (rather than with abundance), and blame the marketing system for unprofitable production, accusing it of exploitation. Perhaps there are times and circumstances when accusations like these are warranted. But, as the arithmetic in the illustration makes clear, there is not a necessary linkage between low farm prices and market exploitation. In fact, a reverse relationship is more likely - between market innovation and better producer profits - even though the farm share does decline gradually over time, as in Table 2. Marketing expands demand by attaching attractive services (like convenience) to products once wholly prepared at home. Cake mixes or heat-and-serve meals provide examples. Also, year-round availability of fresh or frozen foods boosts demand for products once consumed only seasonally. So profit is not a consequence of farmer share. Egg producers do not have an easier time gleaning a profit from their enterprise than do wheat farmers just because the egg share of retail price is high and the wheat share of bread price is low.

Earnings as a Percent of Sales - This is a useful device for putting profit in perspective as a share of consumer expenditures for food. But it is not a useful measure for explaining why marketing firms are in business in the first place. Business exists for a better financial reward than can be had from, say, saving money in a bank at 5 percent. Profit usually is calculated as a percentage return on investment (or on net worth) and not as a return on sales. A way to convert earnings as a share of sales to profit as a return on
investment is to suppose that after a penny or two of profit is taken from sales, the other 98 cents gets reinvested in the business - say in more inventory to sell - and then passes through the cash register again. How many times will this happen in a year? Well, enough times, surely, to generate a profit that is better than interest on money in the bank. The source from which Table 8 was drawn reported average large grocery chain profits (as a percent of net worth) at about 15 percent in 1986-87, and about 10 to 12 percent in the five years before that (McLaughlin).

Value and Utility - The mail order companies are always careful to answer four important questions in describing each item in their catalogs. First, the catalog is precise about product performance - size, color, style, batteries not included, etc. - because buyers need to know these things about product form in deciding if a product is personally useful. Second, the catalog has an expiration date, establishing a time during which purchases may be made. Third, the catalog cannot mention a price without mentioning a place 'shipped from Chicago.' Finally, the catalog gives instructions about how to possess the item, clarifying on an order form matters like price, shipping (to you from the pricing point), and the payment method.

Clearly, a decision to buy will not be forthcoming unless all four of these utility attributes - form, time, place, possession - are satisfactory. Think about it: the failure of any one of these to satisfy will destroy the utility of the whole package just as surely as a flat tire on a car will destroy the utility of all the tires.

The useful abstraction here is that not just catalog companies, but all businesses - entire national economies - are devoted to the single purpose of
committing scarce resources to the creation of utility (form, time, place, possession) that will have market value buyers will pay for.

What is Marketing? - What kind of activity is marketing, and where does it fit in the overall scheme of creating economic value? Perhaps the broadest definition is to divide all economic production (utility creation) into two main categories, saying that manufacturing is the creation of form utility, and that marketing is the creation of time, place, and possession utility. This is a useful abstraction; it helps bring order to apparent chaos. It illustrates, for example, that farms and factories all share a common objective in creating form utility, and that ventures as diverse as warehousing, truckdriving, and advertising are all engaged in the common purpose of creating nonform utility. While the abstraction breaks down in the operating details of individual businesses, it is a useful aid to orderly thinking. It gives broad categories of purpose to all the activities between the producer and the consumer that are included in the marketing bill for U.S. food products.

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[^0]:    *This information set is one of a series of teaching aids used in courses in Agricultural Economics at The Ohio State University. The material also has been distributed to personnel in Ohio State University Extension, including county agricultural agents. Single copies may be obtained by requesting ESO 2079, Department of Agricultural Economics and Rural Sociology, The Ohio State University, Columbus, 43210
    **Professor and student summer intern, respectively, Department of Agricultural Economics and Rural Sociology. The authors are grateful to Denis Dunham, USDA; Jens Knutson, American Meat Institute; Gene German, Corne11 University; and Don Larson, Ohio State University, for suggestions and assistance concerning sources and interpretations, to Maurice Klein for data retrieval, and to Janice DiCarolis and Karlene Robison for graphics and typing.

[^1]:    ${ }^{1}$ Food purchases from grocery stores and other retail outlets, including purchases with food stamps and food produced and consumed on farms because the value of these foods is included in personal income. Excludes governmentdonated foods. ${ }^{2}$ Purchases of meals and snacks by families and individuals, and food furnished employees since it is included in personal income. Excludes food paid for by government and business, such as donated foods to schools, meals in prisons and other institutions, and expense-account meals. ${ }^{3}$ Total may not add due to rounding.

    Source: Putnam, J.J. and E.J. Allshouse, "Food Consumption, Prices and Expenditures, 1970-1990," SB840, ERS, USDA, August, 1992. For 1960 and 1965, SB694, ERS, USDA, November, 1982. For 1950 and 1955, Unpublished data by Alden Manchester, ERS, USDA, August, 1990, and disposable income from SB364, ERS, USDA, June, 1965. 1960-1992 revisions appear in AIB669, ERS, USDA, April, 1993.

[^2]:    ${ }^{1}$ Includes food purchased primarily at retail foodstores. ${ }^{2}$ Includes food purchased at restaurants, fast-food outlets, and other public eating places, and food served in institutions, such as hospitals, schools, and resthomes. ${ }^{3}$ Preliminary.

    Source: Dunham, Denis, Food Cost Review, 1991, AER 662, ERS, USDA, August, 1992.

[^3]:    1 Includes insurance, local transportation, fuel and utilities, accounting and professional services, bad debts, and miscellaneous. Food services are included in this category (in this table) through 1972.
    Taxes will include property, social security, unemployment insurance, license fees, and state and federal income tax. ${ }^{3} 1981$ data.

    Source: For 1984-1991, Dunham, Denis, Food Cost Review, selected issues, ERS, USDA. For 1976 and 1980 , Dunham, Price Spreads, annual issues, ERS, USDA. For 1972 and before, Marketing and Transportation Situation, MTS-198, August, 1975, ERS, USDA.

[^4]:    ${ }^{1}$ Composite of all cuts. ${ }^{2}$ For quantity equivalent to 1 retail pound: beef, 1.142 pounds of wholesale cuts; pork, 1.06 pounds of wholesale cuts. ${ }^{3}$ For quantity of live animal equivalent to 1 retail pound, minus byproduct allowance: beef, 2.4 pounds; pork, 1.7 pounds. ${ }^{4}$ Includes retailing, meat fabricating, wholesaling, and intracity transportation. ${ }^{5}$ Charges for livestock processing and transporting of meat to city where consumed. Percentage of retail price.

