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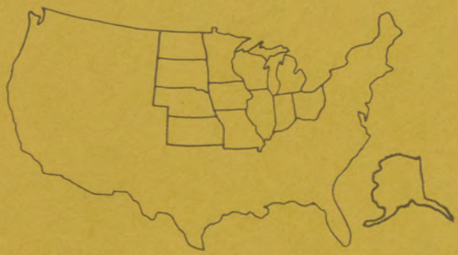
Advertising and Mergers in the Food Manufacturing Industries

by

Loys L. Mather



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CONTENTS

Economic studies, especially of the food industries (5), have dealt with two topics which have implications to both the structure and competitive behavior of firms; namely, product differentiation and mergers. An important determinate of product differentiation, particularly in the food industries, is advertising and has received considerable attention in the literature. More recently, attention has been focused on the structural and competitive implications of the emerging conglomerate or diversified food firms (3). This paper is intended first as an overview to appraise the importance and present status of advertising as a means of product differentiation in the food manufacturing industries. Second, the paper will briefly assess the extent to which advertising and mergers may have jointly become important competitive dimensions of diversified food firms.

IMPORTANCE OF ADVERTISING

Theoretical Basis

Theory suggests that as markets and industries become more highly concentrated, firms will compete less on the basis of price competition and more through such non-price marketing methods as advertising, promotion, and other product differentiating measures. While the assumption that the leading market participants are non-diversified firms of approximately equal competitive potential, is usually not specified in traditional theory, neither are the implications pursued when such an assumption does not hold. Not until recent years, spurred on by the rise of conglomerates, have economists given serious consideration to the competitive implications when one of the leading market participants (or a potential participant) is a conglomerate or diversified firm (1, 2, 3, 4, 6). Of primary interest for this paper is Corwin Edwards' development of the cross-subsidication hypothesis concerning diversified firms. This hypothesis suggests that a conglomerate firm, whether diversified in either product or geographic markets, can absorb losses or sustain lower margins in more competitive markets by offsetting them with profits realized in a higher profit, and presumably less competitive, market.

Cross-subsidization is most often thought of in terms of price. Research related to this paper, however, is concerned with cross-subsidization through advertising. This type of behavior may be well suited to a conglomerate firm seeking to enter an industry and establish a position of market leadership. First, its resource base may enable it to finance its entry and ensuing promotional program - and perhaps realize more long run gains than would likely result from an aggressive price policy. As Scherer has said, any firm can match a price cut almost instantly, but it requires considerable time planning and expertise to offset a well-devised and executed advertising and promotion effort (7). The financial base of the conglomerate could be especially advantageous if the leading competing firms in the industry were primarily specialized (non-diversified) firms. Second, if the merger exhibits high node commonality (6), the ability of the conglomerate to transfer its marketing expertise to the newly acquired firm should be greater.

Several questions arise for examination when testing the cross-subsidization hypothesis:

1. To what extent is the financial base or wealth of the acquiring firm especially in terms of profits and asset size, related to cross-subsidization behavior?

2. To what extent is cross-subsidization behavior associated with higher node commonality? Are those acquiring firms who are functionally related to the industry of the acquired more likely to press for market leadership via advertising than firms in mergers where node commonality is low? If so, food manufacturing firms entering another food manufacturing industry or firms manufacturing non-food products sold in grocery stores would be expected to exhibit more cross-subsidization behavior than manufacturers of lesser related producer goods.

3. Even for mergers where node commonality is high, some acquiring firms are more aggressive marketers than others. Can this be measured through the absolute level of advertising expenditures or the advertising/sales ratio of the acquiring firm?

4. Questions also arise regarding the nature of the acquired firm and particularly its industry. One might postulate that merger entry and cross-subsidy behavior are more likely to occur in those industries where there is greater potential for high product differentiation. Similarly, is there more of a tendency to observe cross-subsidization in industries where the products are more highly formulated or processed than in industry producing primarily commodity foods?

5. Several questions arise regarding the competitive effects of conglomerate acquisitions and cross-subsidization. What different effect is likely on the competitive environment and the long-run structure of industry when the acquired firm has a leading

market position rather than being a firm of moderate relative size? What is the relationship between concentration levels in the industry of the acquired and future levels of competition and concentration?

All of these questions will not be answered directly in this paper, given the stage of research. They do serve, however, to aid in this effort.

Six categories of mergers are defined for use when examining cross-subsidization and node commonality. They are defined in terms of the relationship between the acquiring firm to its new product line.

Horizontal - The acquired and acquiring firms are in the same industry and may be in the same geographic markets. One would not rule out cross-subsidization as a motive, but economies of scale and, possibly, elimination of competition appear more plausible as motives.

Vertical - This category includes firms which, prior to the merger, were vertically related in food manufacturing, but not necessarily the same product line. Cross-subsidization need not result, but when it does, would most likely be expected when there is high commonality between the products of the acquiring firm and the input needs of the acquired firm.

Product Extension-Food - This involves the acquisition of a food manufacturer by another food manufacturer from a different food industry. Node commonality would invariably be high, especially when the end use and marketing channels and expertise are closely related. Thus, subsidization would be expected.

Product Extension-Grocery - This category includes the acquisition of a food manufacturer by a firm which primarily manufactures non-food products sold through grocery stores. As in the product extension-food category, marketing expertise and marketing channels are quite similar, thus, subsidization may likely occur.

Product Extension-Consumer - Included here are mergers where the acquiring firm, while not a manufacturer of food or grocery store products, manufactures other branded consumer products. While one would not expect cross-subsidization to be as strong as in the other two product extension categories, it is possible that the firm's marketing expertise in promoting other consumer products as well as their expertise in marketing consumer goods could influence their marketing behavior in a food division.

Other Conglomerate - This is the case of the pure conglomerate acquisition where little or no functional relationship is discernible between the acquired and the acquiring firms. Cross-subsidization would not be ruled out as a possibility, but is not expected.

Advertising by Major Industry Groups

Advertising serves as a major source of product differentiation in the food manufacturing industries. Food manufacturing corporations spent $2.5 billions on advertising and promotion activities in 1972 or nearly 25% of all corporate advertising in all manufacturing industries (Table 1). Corporations manufacturing tobacco products

TABLE 1. Total Advertising Expenditures of Selected Manufacturing Industries, 1963, 1967, 1972

	1963	1967	1972
	----------millions----------		
Total manufacturing	$5,993	$8,286	$10,474
Food and kindred products	1,637	2,031	2,532
Tobacco	317	363	398
Apparel and other fabricated textiles	126	170	207
Furniture and fixtures	62	72	105
Chemicals and allied products	1,350	1,929	2,476
Petroleum	222	321	392
Primary metals	106	140	143
Motor vehicles	205	520	567

SOURCE: Statistics of Income, Corporation Income Tax Returns, Department of the Treasury, Internal Revenue Service.

spent an additional $398 million.[1] Only SIC 28, chemicals and allied products (which includes soap, detergents, pharmaceuticals, toiletries, paint, etc.), rivals the food industry accounting for slightly less advertising by its manufacturing corporations.

The importance of advertising in the food industries is also evident in the ratio of advertising to sales. From 1963 to 1972, this ratio ranged from 2.27 to 2.54. Only tobacco and chemicals and allied products exceeded food manufacturing with ratios of 4.37 and 3.63 respectively (Table 2). The importance of advertising in the food manufacturing industries relative to other types of economic activity can also be seen in Table 3. The fifty largest advertisers of food products, who may also have advertised non-food products, comprise one-third of all media advertising. The four largest food advertisers alone account for over 10%.

Media Advertising

Various methods are used in advertising and promoting food products including point of purchase promotion, direct mail, etc. The most widely used method is media advertising, three-fifths of which is television (Table 4). Except for 1972, the share of food and tobacco advertising spent on network and spot advertising

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[1]The analysis in this paper usually combines data for food and tobacco manufacturers. This seems appropriate as the leading tobacco manufacturing firms are diversifying into various food industries--thus, they have essentially become food firms.

TABLE 2. Total Advertising Expenditures of Selected Manufacturing Industries as a Percent of Business Receipts, 1963, 1967, 1972

	1963	1967	1972
Total manufacturing	1.43	1.44	1.25
Food and kindred products	2.54	2.52	2.27
Tobacco	5.61	6.04	4.37
Apparel and other fabricated textiles	0.88	0.82	0.76
Furniture and fixtures	1.06	1.07	1.11
Chemicals and allied products	4.13	4.23	3.63
Petroleum	0.53	0.55	0.41
Primary metals	0.37	0.35	0.28
Motor vehicles	0.63	1.07	0.66

SOURCE: Statistics of Income, Corporation Income Tax Returns, Department of Treasury, Internal Revenue Service.

TABLE 3. Total Media Advertising Expenditures for Food and Nonfood Products and Share of All Media Advertising of Leading Food Manufacturers, 1967, 1976[1]

	1967		1976	
Advertiser Group	Expenditures (thousands)	Share (percent)	Expenditures (thousands)	Share (percent)
All food and non-food advertisers	$3,938,756	100.0	$8,104,092	100.0
Four largest food advertisers	443,167	11.3	825,949	10.2
Twenty largest food advertisers	962,807	24.4	1,888,420	23.3
Fifty largest food advertisers	1,280,759	32.5	2,714,648	33.5

[1]Measured media include network and spot television, network radio, magazines, newspaper supplements, and outdoor advertising. Advertising data include food and nonfood advertising of diversified food manufacturers.

SOURCE: Leading National Advertisers.

TABLE 4. Advertising Expenditures for Food and Tobacco Products and Proportion Spent in Measured Media, 1963-1976

Year	U.S. Total	Television Total	Television Network	Television Spot	General Magazine	Newspaper	Radio Total	Radio Network	Radio Spot	Outdoor
millions of dollars										
1963	1062	653	262	391	217	192				
1967	1642	1054	511	543	245	203	140	23	117	
1972	1715	910	418	492	289	288	129	9	120	99
1975	2184	1249	580	669	337	351	126	13	113	121
1976	2622	1531	688	843	393	427	135	17	118	136
1977	3010	1743	889	854	477	467	167	20	147	156
percent										
1963	100	61.5	24.7	36.8	20.4	18.1				
1967	100	64.2	31.1	33.1	14.9	12.4	8.5	1.4	7.1	
1972	100	53.1	24.4	26.7	16.9	16.8	7.5	.5	7	5.8
1975	100	57.2	26.6	30.6	15.4	16.1	5.8	.6	5.2	5.5
1976	100	58.4	26.2	32.2	15	16.3	5.1	.6	4.5	5.2
1977	100	57.9	29.5	28.4	15.8	15.5	5.5	.7	4.9	5.2

SOURCE: Leading National Advertisers, AD $ SUMMARY, various years; Television Bureau of Advertising, SPOT TV INVESTMENTS, annual reports; Radio Expenditure Reports, NETWORK & SPOT ADVERTISERS, quarterly reports; American Newspaper Publishers Association, EXPENDITURES OF NATIONAL ADVERTISERS IN NEWSPAPER, annual reports; and Media Records, NEWSPAPER ADVERTISERS (Blue Book) various years.

continued to increase relative to total media expenditures. The dip in television advertising in 1972 was largely due to the shift in cigarette advertising from television to other media. If an adjustment is made for the increased number of media covered, television accounts for over 60 percent of the increase in total advertising. The relative growth in television advertising has partly affected relative expenditures in magazines and newspapers, but has largely come at the expense of radio. Radio advertising by food manufacturers declined both absolutely and relatively. These trends are consistent with those noted in Technical Study No. 8 of the National Commission on Food Marketing (5).

The media used in promoting food and tobacco products is not greatly different than used in advertising all products and services (Table 5). Slight differences are apparent in that food and tobacco products rely somewhat more heavily on spot television and billboards than all products but somewhat less on network television and radio and also on magazines, despite the heavy use by tobacco and liquor products of the print media.

A slightly different picture emerges when advertising expenditures are expressed in real terms (Table 6). Television remained the predominate media from 1965 through 1977, but lost some of its media share to magazines. During the mid to late 1970's, the demand for television time increased substantially contributing to sizeable increases in television commercial rates. This, in turn, led some advertisers to seek alternative media. The erosion in the television share is even more pronounced when only unit costs are considered

TABLE 5. Share of Total U.S. and of Food Advertising Expenditures by Media

	1975		1976		1977	
	Total	Food	Total	Food	Total	Food
	----------------	----------------	percent	----------------	----------------	----------------
Total Television	53.5	57.2	54.7	58.4	54.9	57.9
Network Television	31.4	26.6	31.2	26.2	33.3	29.5
Spot Television	22.1	30.6	23.5	32.2	21.6	28.4
Total Radio	7.0	5.8	6.5	5.1	6.4	5.5
Network Radio	1.1	.6	1.1	.6	1.2	.7
Spot Radio	5.9	5.2	5.4	4.5	5.2	4.9
Magazines	19.9	15.4	19.6	15.0	20.4	15.8
Newspapers	19.6	16.1	16.4	16.3	15.7	15.5
Outdoor	3.0	5.5	2.8	5.2	2.6	5.2

SOURCE: Advertising Age, September 26, 1977 and Table 4.

TABLE 6. Real Advertising Expenditures for Food and Tobacco Products Adjusted for Media Cost Per Thousand, 1963-1977

		TELEVISION					RADIO			
Year	U.S. Total	Total	Network	Spot	General Magazine	Newspaper	Total	Network	Spot	Outdoor
					millions of dollars					
1963	1118	704	301	403	215	199				
1967	1637	1054	511	543	245	198	140	23	117	[1]
1972	1602	871	398	473	258	236	134	9	125	103
1975	1782	1022	460	562	280	228	128	13	115	124
1976	1836	1036	462	574	314	253	121	15	106	112
1977	1932	1958	511	547	361	255	137	16	121	121
					percent					
1963	100	63.0	26.9	36.1	19.2	17.8				
1967	100	64.4	31.2	33.2	15.0	12.1	8.6	1.4	71	
1972	100	54.4	24.9	29.5	16.1	14.7	8.4	0.6	7.8	6.4
1975	100	57.4	25.8	31.6	15.7	12.8	7.2	0.7	6.5	7.0
1976	100	56.4	25.2	31.2	17.1	13.8	6.6	0.8	5.8	6.1
1977	100	54.8	26.5	28.3	18.7	13.2	7.1	0.8	6.3	6.3

[1]Not available.

SOURCE: Table 4 and Appendix TAble A2.

(Appendix Table A-3) but are less severe on a cost per thousand basis where the changing size of the viewer or reader audience is considered.

There are aspects of advertising regarding use of alternative media which are germane in a study of the competitive implications of advertising, but are beyond the scope of this paper. This would include an analysis of the effectiveness of advertising in alternative media as well as effectiveness within a media. For example, network television apparently is a favored media by many large food manufacturers. Yet, it appears that within this media, firms seek to sponsor not only programs on prime time, but also prime programs on prime time, i.e., those programs with higher viewer ratings. Thus, an additional dimension of advertising competition between firms can arise.

Industry Advertising Expenditures

Two sources were used for obtaining advertising data on an industry basis, the Sourcebook of Corporation Tax Returns published by the Internal Revenue Service (Table 7) and publications from Leading National Advertisers (Table 8). The former includes all advertising and promotion expenditures incurred by food manufacturing corporations while the latter includes only advertising in the measured media.[2] The advertising to sales ratios based on measured media are

[2] Measured media advertising comprises 60 to 68% of total advertising and promotion in the food industries, based on estimates from LNA and <u>Advertising Age</u> data.

TABLE 7. Total Advertising as a Percent of Sales of Food Manufacturing Corporations by Food Industry Group, 1967 and 1971

Industry Group	SIC	1967	1971
Soft drinks	2086	6.38	4.68
Malt liquors	2082	5.96	4.27
Grain mill products	204	3.44	3.80
Canned and frozen foods	203	2.60	2.32
Bakery products	205	2.37	1.74
Dairy products	202	1.56	1.42
Meat products	201	0.55	0.40
Sugar	206	0.39	0.37

SOURCE: Sourcebook, Statistics of Income, Corporate Tax Returns, U.S. Treasury Department, Internal Revenue Service.

TABLE 8. Measured Media Advertising as a Percent of Sales by Food Manufacturing Industry Group, 1967 and 1976[1]

Industry Group	SIC	LNA	1967	1976
			----percent----	
Chewing gum	2067	F 211	11.25	9.94
Breakfast cereals	2043	F 122	9.10	8.29
Liquor	2085	F 330	6.20	6.51
Macaroni, spaghetti	2098	F 125	1.92	5.55
Wine	2084	F 320	10.0	3.17
Coffee	2095	F 171	2.16	2.84
Beer	2082	F 310	3.57	2.23
Soft drinks	2086	F 221-223	3.36	2.20
Shortening, oils	2079	F 112	2.64	2.18
Candy	2065 2066	F 211	1.17	1.37
Bread products	2051	F 161-162	0.78	0.85
Flour products	2041 2045	F 113	0.79	0.84
Cheese	2022	F 132	0.53	0.47
Poultry	2016 2017	F 150	0.11	0.22
Meatpacking	2011	F 150	0.13	0.12

[1]Measured media are network and spot television, network radio, magazines, newspaper supplements, and outdoor.

SOURCES: Concentration Ratios in Manufacturing, Census of Manufacturing, U.S. Department of Commerce, Bureau of the Census; U.S. Industrial Outlook 1977, U.S. Department of Commerce, Domestic and International Business Administration; and Ad $ Summary and Class/Brand $, Leading National Advertisers (LNA).

perhaps more useful than those based on corporate tax returns, since the former can be obtained on a 4-digit industry basis. Where comparisons are possible, the two tables, however, provide an interesting comparison with generally consistent results.

Advertising as a percent of sales seems to have declined somewhat, although the decline is more pronounced from 1967 to 1971 (Table 7) than from 1967 to 1976 (Table 8). The industries with the highest levels of product differentiation were chewing gum, breakfast cereals, liquor, and macaroni and spaghetti. All had ratios over five percent. Macaroni and spaghetti had the largest increase in advertising from 1.92 percent in 1967 to 5.55 in 1976. This appears to be due largely to prepared macaroni dinners which are included in LNA class F125. The next group of industries had more modest levels of advertising ranging from 2.18 to 3.17 percent. These were wine, coffee, beer, soft drinks, and shortening and oils. Advertising as a percent of sales fell drastically in wine from 10.0 to 2.17 percent. This appears to be due to the rapid increase in industry sales with less than proportional increases in advertising outlays. Candy may appear to be a product which could be easily differentiated through advertising, but registers a modest ratic of 1.37. The commodity foods, bread, flour, cheese, poultry, and meat, all had low levels of differentiation with advertising less than 1 percent of sales. The ratio for poultry doubled from 1967 to 1976, though still at a low 0.22%. A likely cause of this change will be discussed later.

Significant differences exist in media used within and across the food and tobacco industries (Table 9). The most noteworthy change

TABLE 9. Media Advertising Expendit›res by LNA Major Industry Groups

Media	Food $	Food %	Beer, wine liquor $	Beer, wine liquor %	Confections snacks, soft drinks $	Confections snacks, soft drinks %	Tobacco Products $	Tobacco Products %	Totals $	Totals %
Magazines										
1977	140.2	9.2	132.3	25.7	10.4	2.4	194.5	35.8	477.4	15.9
1970	86.3	10.7	97.9	29.2	13.1	5.6	64.7	20.6	262.0	15.5
Newspapers										
1977	136.6	9.0	71.2	13.8	25.4	5.8	234.2	43.1	467.4	15.5
1970	97.5	12.1	65.4	19.5	10.4	4.4	19.0	6.0	192.3	11.4
Network television										
1977	581.7	38.3	135.3	26.4	156.2	35.9	15.8	2.9	889.0	29.5
1970	263.9	32.7	30.1	9.0	67.1	28.7	162.2	51.5	523.3	30.9
Spot television										
1977	556.0	36.6	91.3	17.8	203.3	46.7	3.5	0.6	854.1	28.4
1970	310.0	38.4	66.7	19.9	103.0	44.0	50.5	16.1	530.2	31.3
Network radio										
1977	9.5	0.6	3.3	0.6	7.1	1.6	.2	0	20.1	0.6
1970	4.7	0.6	0.7	0.2	2.2	0.9	2.7	0.9	10.3	0.6
Spot radio										
1977	84.7	5.6	37.1	7.2	24.6	5.7	0.9	0.2	147.0	4.9
1970	35.6	4.4	39.6	11.8	33.6	14.3	10.2	3.2	119.0	7.0
Outdoor										
1977	9.3	0.6	43.8	8.5	7.9	1.8	94.4	17.4	155.4	5.2
1970	9.1	1.1	35.0	10.4	4.8	2.1	5.4	1.7	54.3	3.2
Total										
1977	1517.7	100	514.3	100	434.9	100	543.5	100	3010.4	100
1970	807.1	100	335.4	100	234.2	100	314.7	100	1691.4	100

SOURCE: See Table 4.

is the shift by tobacco products from the broadcast to the print media in 1971. Network television is the most important media for food products and beer and wine, and second most important for confections and soft drinks. Beer and wine expenditures on network television have increased threefold during the seven-year period. Spot television is the most important media for confections and soft drinks, perhaps due to the regional nature of many of these firms. Radio and outdoor advertising are relatively insignificant media for all major industry groups except tobacco, which spends 17 percent of its advertising on billboards.

CONCENTRATION OF FOOD ADVERTISING

Not only is the level of advertising expenditures in food and tobacco industries high relative to other manufacturing industries, but the expenditures are highly concentrated among a few large companies. Four large food manufacturers account for one-fifth of the measured media advertising of food products in 1976 (Table 10). The eight largest advertisers account for one-third. The largest advertiser of food, General Foods, alone accounts for 10 percent of all measured media food advertising. These findings are all the more interesting in view of a recent study by Michael Varner (8). Comparing 1963, 1967 and 1972 data, he concluded that concentration in advertising was possibly holding constant, but may have begun to decline by 1972. In view of the 1976 data, the decline in concentration noted in 1972 appears to have been more of a dip than the beginning of a trend.

The data in Table 10 refer to all measured media except radio and newspapers. It is useful to observe the level of concentration in network and spot television since these are the favored, and likely most effective media. Four firms account for one-third of the network television advertising of food while the eight largest advertisers comprise 46 percent (Table 11). Finally, the twelve largest food advertisers comprised a sizeable 57% of all network television advertising of food. Again, General Foods holds the largest share by spending 16 percent of all advertising of food on network television. The concentration levels between 1967 and 1976 are virtually identical.

As expected, spot television advertising is not as highly concentrated as that of network television, where smaller, regional firms theoretically have easier access (Table 12). For spot television, the four and eight largest firms account for nearly 19 percent and 30 percent respectively while the twelve largest held a 37% share. The identity of companies shifted considerably more than was the case with network television. Several firms entered the top 12 in 1976. Although concentration levels were lower than in 1967, they are still quite high.

The concentration of advertising by food manufacturers among large firms is also apparent when analyzed by asset group. Considering the relatively short period of time involved, a definite shift of advertising from small to large corporations has resulted in a rather wide disparity between the largest size class and all others (Table 13). Sixty percent of the 1971 advertising by food manufacturing corporations is done by firms with more than $250 million in assets. Both the dollar amount and the relative share for the smaller groups declined. The increase in advertising share of the largest corporations continues a

Table 10. THE EIGHT LARGEST MEDIA ADVERTISERS OF MANUFACTURED FOOD PRODUCTS, 1967, 1972, 1976[1]

1967			1972			1976		
Company	Expenditures (thousands)	Share %	Company	Expenditures (thousands)	Share %	Company	Expenditures (thousands)	Share %
General Foods	89,200	8.67	General Foods	94,118	8.60	General Foods	184,044	10.05
Coca-Cola	46,532	4.52	General Mills	45,637	4.17	General Mills	82,490	4.5
General Mills	43,355	4.21	Kellogg	35,905	3.29	PepsiCo	59,763	3.26
Kellogg	40,203	3.91	Kraftco	35,792	3.29	Kraft	57,534	3.14
Top 4 Totals	219,290	21.31	Top 4 Totals	211,532	19.33	Top 4 Totals	383,831	20.96
Kraftco	28,277	2.75	Coca-Cola	33,578	3.07	Procter & Gamble	55,017	3.00
PepsiCo	26,217	2.55	PepsiCo	33,144	3.03	Coca-Cola	51,733	2.82
Campbell Soup	25,633	2.49	Heublein	28,865	2.64	Kellogg	51,277	2.80
Wrigley	23,235	2.26	Procter & Gamble	28,028	2.56	Nestle	50,759	2.77
Second 4 Totals	103,362	10.05	Second 4 Totals	123,615	11.30	Second 4 Totals	208,786	11.39
Top 8 Totals	322,652	31.36	Top 8 Totals	335,147	30.63	Top 8 Totals	592,617	32.35
Industry Totals	1,029,047	100.	Industry Totals	1,094,320	100.	Industry Totals	1,831,480	100.

1. Advertising expenditures in network and spot television, magazines, and newspaper supplements.

SOURCES: Michael C. Varner, Advertising and Conglomeration in the Food Processing Industries, Ph.D. Dissertation, Department of Agricultural Economics, Cornell University, September 1976 and Company/Brand $, Leading National Advertisers, 1976.

TABLE 11. CONCENTRATION OF NETWORK TELEVISION ADVERTISING OF FOOD BY LEADING FOOD MANUFACTURERS, 1967 AND 1976

1967			1976		
Firm	Expenditures (thousands)	Share (%)	Firm	Expenditures (thousands)	Share (%)
General Foods	$43,153	13.13	General Foods	$107,064	16.04
General Mills	26,715	8.13	General Mills	44,932	6.73
Kellogg	24,285	7.39	Kellogg	32,343	4.84
Carnation	13,340	4.06	Nestle	32,091	4.81
Top 4 Totals	106,493	32.71	Top 4 Totals	216,430	32.42
Kraftco	12,887	3.92	J. Schlitz Brewing	28,551	4.28
PepsiCo	11,677	3.55	PepsiCo	24,032	3.60
Procter & Gamble	11,150	3.39	Nabisco	20,340	3.04
Campbell Soup	9,644	2.93	Campbell Soup	19,483	2.92
Second 4 Totals	45,358	13.79	Second 4 Totals	92,406	13.84
Top 8 Totals	151,851	46.50	Top 8 Totals	308,836	46.26
Quaker Oats	9,580	2.91	Pillsbury	19,097	2.86
Nabisco	9,346	2.84	Kraftco	17,097	2.68
Standard Brands	7,604	2.31	Coca-Cola	17,745	2.66
Lever Bros.	7,540	2.29	Norton Simon	16,637	2.49
Third 4 Totals	34,070	10.35	Third 4 Totals	71,350	10.69
Top 12 Totals	185,921	56.85	Top 12 Totals	380,186	56.95

SOURCE: Leading National Advertisers

TABLE 12. CONCENTRATION OF SPOT TELEVISION ADVERTISING OF FOOD BY LEADING FOOD MANUFACTURERS, 1967 AND 1976

1967 Firm	Expenditures (thousands)	Share (%)	1976 Firm	Expenditures (thousands)	Share (%)
Coca-Cola	$ 39,661	8.02	General Foods	$ 58,694	6.99
General Foods	37,500	7.58	PepsiCo	34,798	4.15
Wm. Wrigley	21,756	4.40	Wm. Wrigley	33,897	4.04
Continental Baking	16,223	3.28	Coca-Cola	29,073	3.46
Top 4 Totals	115,140	23.28	Top 4 Totals	156,462	18.64
PesiCo	13,847	2.80	General Mills	27,374	3.26
Kellogg	13,514	2.73	Kraftco	27,213	3.24
General Mills	12,464	2.52	Procter & Gamble	21,879	2.61
Lever Bros.	10,856	2.19	Mars	16,187	1.93
Second 4 Totals	50,691	10.24	Second 4 Totals	92,653	11.04
Top 8 Totals	165,821	33.52	Top 8 Totals	249,115	29.68
Procter & Gamble	10,425	2.11	CPC International	16,046	1.91
Seven-Up	9,935	2.01	Nestle	15,216	1.81
Quaker Oats	9,264	1.87	Borden	15,214	1.81
Standard Brands	9,044	1.83	Kellogg	15,104	1.80
Third 4 Totals	38,664	7.82	Third 4 Totals	61,580	7.33
Top 12 Totals	204,489	41.34	Top 12 Totals	310,069	37.01

SOURCE: Leading National Advertisers

TABLE 13. DISTRIBUTION OF ADVERTISING OF FOOD MANUFACTURING COMPANIES BY YEAR AND ASSET GROUP

Asset Size Class (thousand dollars)	Year 1962	1967	1971
	----------------Percent----------------		
All Food Manufacturing Corporations	100.0	100.0	100.0
Less Than 100	1.6	1.2	0.8
100 - 999.9	6.4	3.6	3.2
1,000 - 49,999.9	31.1	22.4	16.9
50,000 - 99,999.9	15.1	9.6	6.9
100,000 - 249,999.9	20.0	20.6	10.9
250,000 and over	25.8	42.7	61.3

SOURCE: Sourcebook, Statistics of Income, Corporation Income Tax Returns, U.S. Treasury Department, Internal Revenue Service.

trend observed by the National Commission on Food Marketing, except the share held by the largest firms, those with over $100 million in assets, increased much more rapidly in the past 10 years (from 45% to 71 %) than during the 14 year period studied by the Food Commission (from 32% to 47%) (5).

The disparity and the increase in advertising by the largest food manufacturing corporations do not seem to be explained simply on the basis of a larger volume of sales. To the contrary, advertising to sales ratios rose with increasing firm size indicating greater advertising intensity by the larger firms (Table 14). While these ratios generally declined over most size classes except the largest, the largest decline was by the medium sized firms.

To summarize the preceding, advertising is an important dimension in the product differentiation activity of food manufacturing firms, In particular, food manufacturing leads all other manufacturing industries in the level of total advertising expenditures. Of particular interest in industrial organization analysis, the concentration of advertising among a few leading food manufacturers is high and appears to be increasing. This is especially true for measured media and, importantly, for television. Finally, advertising as a percent of sales varies considerably across food manufacturing industries, but is higher in those industries consisting primarily of more highly processed foods than those industries mainly composed of commodity foods.

TABLE 14. ADVERTISING EXPENDITURES OF FOOD MANUFACTURING CORPORATIONS AS A PERCENT OF SALES, BY SIZE OF TOTAL ASSETS, 1962, 1967, 1971

Asset Size Class (thousand dollars)	Year 1962	1967	1971
	Percent		
All Food Manufacturing Corporations	2.4	2.5	2.3
Less Than 100	1.4	0.9	1.3
100 - 999.9	0.9	0.7	0.7
1,000 - 49,999.9	2.1	1.6	1.2
50,000 - 99,999.9	3.8	3.3	2.4
100,000 - 249,999.9	3.5	3.9	2.5
250,000 and over	3.2	3.8	3.7

SOURCE: Sourcebook, Statistics of Income, Corporation Income Tax Returns, U.S. Treasury Department, Internal Revenue Service.

EFFECT OF ACQUISITIONS AND ADVERTISING

It is beyond the scope of this paper to deal extensively with the extent of merger activity in food manufacturing industries, either acquisitions of or by food manufacturers. As Table 15 indicates, the food manufacturing industries have had considerable merger activity ranging from 46 in 1960 to a peak of 178 in 1969 and dropping to 36 in 1975. While structural studies are typically most concerned with those acquisitions classified as "large mergers", that is, those mergers where assets of the acquired firm exceed $10 million, large food manufacturers have made numerous acquisitions of firms with less than $10 million in assets. Further, many of the acquired brands, which are being promoted by the acquiring firms, came from the ranks of the small mergers.

Advertising and Mergers

Research is still in progress which is intended to test the cross-subsidization hypothesis, thus results to be reported in this paper will be limited. It is possible at this juncture, however, to provide preliminary findings pertaining to the hypothesis. These findings will center primarily on the importance of acquired brands in the advertising budgets of merger active food manufacturers, and on initial empirical evidence on cross-subsidization for individual mergers.

Merger Active Firms

If there is an association between merger activity and subsidization through advertising expenditures, it should be reflected in the amount of a firm's advertising budget devoted to acquired brands. To test this, six merger-active food manufacturers were selected and chosen to represent a cross-section of the food industries,

TABLE 15. Number of Acquisitions of Food Manufacturing Companies, 1960 to 1975

Year	All Acqusitions	Large Acquisitions[1]
1960	46	5
1961	69	6
1962	55	4
1963	62	6
1964	110	11
1965	91	9
1966	97	16
1967	99	5
1968	154	16
1969	178	10
1970	45[2]	9
1971	34[2]	9
1972	79	11
1973	74	8
1974	41	3
1975	36	5

[1] Mergers where the assets of the acquired firm exceeds $10 million.

[2] Partial

SOURCE: Bureau of Economics, Federal Trade Commission that is, a cross-section in terms of the firm's primary line of business prior to its expansion program. The firms selected were Beatric Foods (dairy), Consolidated Foods (food retail), Norton Simon (vegetable canning), PepsiCo (soft drinks), Pillsbury (flour), and the Liggett Group (tobacco).

Acquired brands accounted for a sizeable portion of the advertising expenditures for each of these firms (Table 16). All six had a large share of their expenditures devoted to acquired food brands, ranging from 26 percent for PepsiCo to nearly 60 percent for the Liggett Group. In addition, Beatrice, Consolidated Foods, and Norton Simon spent from 14 to 23 percent of their advertising expenditures on acquired non-food brands. Advertising of all acquired brands, food and non-food, ranged from one-third of the PepsiCo's advertising to approximately 60 % for Beatrice, Consolidated Foods, Norton Simon, and the Liggett Group. While these data are not intended as a test of the cross-subsidization hypothesis, they do suggest that, at least, for this group of firms, acquired brands recieved considerable promotional support from their acquiring firms.

Cross-Subsidization

One method in analyzing the cross-subsidization hypothesis is to compare the advertising expenditures on a brand prior to the merger with the expenditures following the acquisition. The Food Commission conducted such a test and concluded from their sample that expenditures had nearly doubled the first full year following the year of acquisition as compared to the year before the merger (5). Research is underway to update the work of the Food Commission.

TABLE 16. IMPORTANCE OF ACQUIRED BRANDS IN RELATION TO TOTAL ADVERTISING EXPENDITURES OF SELECTED MERGER ACTIVE FOOD MANUFACTURERS, 1976

Firm	Total Advertising Expenditures (thousands)	Share of Expenditures Devoted to: Acquired Food Brands	Acquired Non Food Brands	All Acquired Brands
		Percent		
PepsiCo	$64,014	26.0	6.5	32.5
Pillsbury	49,919	46.7	1.1	48.8
Norton Simon	46,942	47.5	18.3	65.7
Liggett Group	37,485	58.8	6.8	65.6
Beatrice Foods	18,408	35.7	23.6	59.3
Consolidated Foods	17,529	49.8	14.1	63.9

SOURCES: Bureau of Economics, Federal Trade Commission and Leading National Advertisers.

This current study is extending the pre-merger period to three years before the merger and the post-merger period to four years following the year of acquisition. Additional media will be included, adding network and spot radio and outdoor advertising to the network and spot television, magazines, and newspaper media covered previously by the Commission. Finally, the current research will assess the correlation between the change in advertising expenditures in the pre and post merger periods to many of the variables discussed in the first section of this paper.

Overall Results. Although results are preliminary and require further analysis, they are generally supportive of the hypotheses regarding cross-subsidization (Table 17). Data are available from preliminary analysis on 68 acquisitions occurring between 1965 and 1972. Advertising expenditures for two years before and two years after the merger were examined. For all 68 mergers, post-acquisition advertising expenditures increased 11.8 percent compared with pre-acquisition expenditures, though these data are not yet adjusted for increased media costs. If an adjustment is made for increased media cost, then there apparently was no increase in advertising expenditures after the mergers as compared before the mergers. The results are different, however, when examined according to the type of acquisition.

Advertising expenditures increased in all three product extension categories, which was consistent with the hypotheses. The largest cross-subsidization, an increase of 181 percent, came from the grocery store product manufacturers (e.g., Clorox, Chesebrough-Ponds, American Home Products) who acquired food manufacturing firms. Acquisitions where both the acquired and acquiring firms were within the food manufacturing industries resulted in a 41 percent increase in expenditures.

TABLE 17. PREACQUISITION AND POSTACQUISITION ADVERTISING EXPENDITURES FOR ACQUIRED FOOD MANUFACTURING FIRMS, 1965-1972; PRELIMINARY FINDINGS

Type of Acquisition	Number	Preacquisition Expenditures	Postacquisition Expenditures	Change in Expenditures
		--Thousands--		(percent)
Horizontal	11	$ 22,102	$ 15,138	-31.5
Vertical	5	4,524	2,939	-35.0
Product Extension (Food)	32	40,538	57,154	41.0
Product Extension (Grocery)	5	4,291	12,068	181.3
Product Extension (Consumer)	1	2,680	6,628	147.3
Other Conglomerate	14	123,842	127,372	2.9
Totals	68	$197,977	$221,299	11.8

The horizontal and vertical categories resulted in negative changes in expenditures. In the five vertical mergers, there was some suggestion, however, that the tendency for cross-subsidization was higher when node commonality was higher. The horizontal merger results are largely influenced by brewing mergers, which will be discussed in a later section.

The results were as expected for those acquiring firms classified as "other conglomerate". Advertising expenditures increased only 2.9 percent and will most likely indicate a net decrease when adjusted by an advertising cost index.

Industry Results. The meat packing industry provides an interesting example of the alternate hypotheses regarding cross-subsidization. Until recent years, the leading meatpacking firms were independently owned. Two of the leading firms, Armour and Wilson, have been acquired by conglomerates having little functional relation to meatpacking. Swift was merged into Esmark, a holding company apparently organized to facilitate diversification, but this appears to be more of an internal transaction than an external merger. Two leading firms remain under independent ownership, Oscar Mayer and Hormel. Finally several acquisitions have ocurred primarily involving large food manufacturers and primarily regional meat packers. These involve the Beatrice Foods acquisition of Peter Eckrich, the Consolidated Foods acquisitions of Bryan Brothers Packing and Kahns, the Kane-Miller acquisition of American Meat Packing, General Host's acquisition of Cudahy, and Green Giant's acquisitions of Copeland Sausage Company and Schweigert's Meat Company. In addition, IT&T acquired Gwaltney, a relatively small packer.

Changes in advertising expenditures in 1967 (prior to the acquisitions) and 1976 (after all mergers had ocurred) are summarized in Table 18. The share of industry advertising attributed to firms acquired by conglomerates, where there was low node commonality, fell from 38.4% in 1967 to 24.6% in 1976. Second, the two large, independently owned packers and Esmark (Swift) lost some of their advertising share, slipping from 36.8% to 32.8%. In contrast, the advertising share held by the seven packers acquired by food manufacturers (thus relatively high node commonality was present) increased from nearly 3% to over 11% during the same time period. Most notable was the increase in the Eckrich advertising by Beatrice Foods. Advertising by Eckrich increased from $175 thousand in 1967 to over $3 million in 1976 making Eckrich the fifth leading advertised brand of meat products, only slightly behind forth place Hormel and well ahead of sixth place LTV/Wilson.

Four mergers are noteworthy in the poultry industry. The acquisitions of Armour and Swift were discussed previously, but both were also advertisers of frozen turkeys. Armour's advertising decreased slightly after the merger, falling from $552 thousand to $541 thousand. Swift's advertising increased by one-third from $2.3 million to $3 million. By 1976, however, both firms had decreased their advertising expenditures to $387 thousand for Armour and $1.7 million for Swift. In contrast to the Armour and Swift results (where both are controlled primarily by holding companies) are those from the acquisition of F. M. Stamper & Co. by RCA. The node commonality in this case is quite low. RCA does manufacture some consumer products, but the channels of distribution compared with food are vastly different.

TABLE 18. CHANGE IN ADVERTISING EXPENDITURES IN THE MEATPACKING AND SAUSAGE INDUSTRIES, 1967 AND 1976

Firm Groups	Advertising Expenditures 1967	1976
	---------thousands---------	
Industry Total	$23,710	$43,743
GROUP I: Acquired by non-food firms		
Greyhound/Armour	4,933	4,956
IT&T/Gwaltney	36	323
LTV/Wilson, Fischer	1,095	1,007
Group Total	6,064	6,286
Industry Share	(25.6)	(14.4)
GROUP II: Leading advertisers independently owned		
Esmark (Swift)	3,040	4,488
Hormel	2,158	3,862
Oscar Mayer	3,524	5,982
Group Total	8,722	14,332
Industry Share	(36.8)	(32.8)
GROUP III: Acquired by diversified food firms		
Beatric Foods/Eckrich	175	3,189
Consolidated Foods/Bryan	31	478
Consolidated Foods/Kahns	165	224
General Host/Cudahy	110	641
Green Giant/Copeland	128	73
Green Giant/Schweigerts	35	200
Kane-Miller/American Meat Packing	15(est)	76
Group Total	659	4,881
Industry Share	(2.8)	(11.2)

SOURCE: Leading National Advertisers, and the Bureau of Economics, Federal Trade Commission.

Yet total advertising expenditures increased from $2.2 million for Banquet frozen poultry and dinners for the two years prior to the merger to a combined total of $6.6 million for the first two post merger years. During the next three years, expenditures ranged from $2.4 million to $3 million before dropping off to $1.4 million in 1976. Whether the drop in expenditures signals a loss of interest, or satisfaction of the firm's goal regarding market share (or for some other reason) is not known.

Perhaps the most interesting acquisition in the poultry industry, especially in terms of its ultimate position, was the Federal Company's acquisition of Holly Farms. The Federal Company had been vertically related to food manufacturing through cotton warehousing but more recently had become diversified into flour milling and related products. They acquired Holly Farms in 1968, a brand of poultry products previously unadvertised, or at least of such low level of advertising that the expenditures were not reported. The Federal Company began advertising the Holly Farms brand in 1970 with the following expenditures (in thousands) through 1975: $28, $22, $92, $315, $759, and $1,700. By 1976, expenditures reached $2.4 million which helped Holly Farms become the leading advertised brand of poultry products.

The canned seafood industry provides an example of possible long run consequences of merger entry by diversified firms. Three leading brands were acquired in the early 1960's. Heinz and Ralston acquired Star Kist and Chicken of the Sea (Van Camps) respectively in 1963, and Bumble Bee was acquired by Castle & Cooke in 1961. By 1967, these brands accounted for 68% of the canned seafood media advertising. In 1976, however, their share of advertising had increased to 93%. More analysis would be needed to draw any conclusions from this regarding potential long run shifts in the industry's structure, but it raises the question as to how long the industry can sustain this concentrated level of advertising without altering its structure.

The brewing industry provides the final example. Prior to the late 1960s, the brewing industry was composed of a few leading national firms, several regional firms, and a host of small local brewers. The industry was noted for the degree of specialization and independent ownership of the brewing firms. In 1970, Phillip Morris completed its acquisition of the Miller Brewing Company, then the sixth largest brewer. As seen in Table 19, an aggressive advertising campaign began which saw Miller increase its share of advertising in the brewing industry from 8.8% in 1967 to 21% in 1976. This was accomplised by raising advertising outlays from $6.5 million in 1968, the year before the acquisition began, to over $29 million in 1976. Miller's market share of beer sold increased from 4.9% in 1968 to 11% in 1976 making Miller the fourth largest brewer and less than a percentage point behind the third ranked Pabst. Throughout these years, Miller's advertising costs per barrel ranged from $1.50 to $2.59 per barrel, an expenditure which was usually 50% higher and at times 2.5 times higher than Schlitz, who has the second most expensive advertising cost per barrel.

During 1977, Miller spent over $42 million in media advertising and had become the second largest brewer, replacing Schlitz. It seems likely that the resource base and advertising experience of a firm such as Phillip Morris may have been a definite asset.

TABLE 19. CHANGE IN SHARE OF ADVERTISING EXPENDITURES IN THE BREWING INDUSTRY, 1967 AND 1976

Group	1967		1976	
	Expenditures (thousands)	Share (%)	Expenditures (thousands)	Share (%)
19 acquired brands	$22,337	21.3	$ 8,717	6.3
Miller Brewing	9,236	8.8	29,116	21.0

SOURCE: Leading National Advertisers, and the Bureau of Economics, Federal Trade Commission.

The implications to industry structure are profound. Only a few national brewers (especially Anheuser-Bush and Schlitz) appear able to effectively survive the competitive pressure from the Phillip Morris/Miller pursuit of market leadership, while many local brewers are closing and most regionals are facing declining market shares.

SUMMARY

This paper serves as a progress report on research regarding the role of advertising in the U.S. food and tobacco manufacturing industries and the competitive effect of advertising and mergers. The food and tobacco industries lead all other industries in use of the advertising media. The fifty largest firms advertising food and tobacco products alone comprise one-third of media advertising for all industries.

Within the food and tobacco industries, advertising expenditures are somewhat concentrated, with the eight largest media users accounting for one-third of the expenditures. Concentration is higher within the individual media, as the 12 leading food and tobacco advertisers account for 57% of the network television advertising and 37% for spot advertising.

The cross-subsidization hypothesis is being investigated. In particular, the degree of node commonality between the acquiring and the acquired firm is being studied with respect to pre and post merger advertising expenditures. Preliminary results suggest that the higher the degree of node commonality, the greater the incidence of cross-subsidization through advertising. In particular, diversified food manufacturers involved in product extension mergers are likely to substantially increase the level of advertising in their acquired firm following acquisition. Of 68 mergers occurring between 1965 and 1972, 37 were of the product extension type. Advertising expenditures in these firms increased 54% in the two years following acquisition compared to the two years prior to acquisition. Research presently underway is extending the pre and post merger comparative periods.

The implications to industry structure and competition (both price and nonprice) are considerable particularly in those industries where conglomerate mergers have occurred followed by an advertising cross-subsidization.

Since this paper has been based on preliminary results, definite conclusions are premature. The results so far, however, are suggestive that continued study is warranted and that cross-subsidization is not an uncommon occurrance in the food industries.

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APPENDIX

TABLE A-1a Advertising Expenditures for Food and Food Products by Media, 1962-1977

	Magazines	Newspapers	Network Television	Spot Television (thousands of dollars)	Network Radio	Spot Radio	Outdoor	Total
1962	111,875	105,598	133,656	179,183		-		530,312
1963	109,424	89,367	139,527	208,525				546,843
1964	112,082	94,327	189,308	240,025				635,742
1965	112,556	91,313	205,119	254,586				663,574
1966	104,116	100,842	236,780	276,369				718,107
1967	101,195	104,499	264,575	296,217	12,958	40,003		819,447
1968	95,055	101,649	242,821	301,274	8,256	35,297		784,352
1969	90,155	103,479	263,040	245,810	4,980	40,821		748,285
1970	86,320	97,510	263,914	310,021	4,741	35,639	9,074	807,219
1971	97,997	91,613	268,040	323,776	6,930	38,718	10,006	837,071
1972	107,492	101,330	290,881	297,110	5,627	30,738	8,703	841,881
1973	90,415	96,020	317,292	332,562	5,187	32,080	7,536	881,092
1974	86,930	100,203	343,260	397,994	6,996	37,847	7,852	981,082
1975	87,308	113,450	390,710	444,260	6,051	54,398	8,096	1,104,273
1976	113,026	126,804	449,263	555,709	7,432	53,968	6,347	1,312,549
1977	140,150	162,039	581,661	556,956	9,516	84,395	9,317	1,544,034

SOURCES: Leading National Advertisers, AD & SUMMARY, various years; Television Bureau of Advertising, SPOT TV INVESTMENTS, annual reports; Radio Expenditure Reports, NETWORK & SPOT ADVERTISERS, quarterly reports; American Newspaper Publishers Association, EXPENDITURES OF NATIONAL ADVERTISERS IN NEWSPAPERS, annual reports; and Media Records, NEWSPAPER ADVERTISERS (Blue Book) various years.

TABLE A-1b ADVERTISING EXPENDITURES FOR CONFECTIONS AND SOFT DRINKS BY MEDIA, 1962-1977[1]

(thousands of dollars)

	Magazines	Newspapers	Network Television	Spot Television	Network Radio	Spot Radio	Outdoor	Total
1962	14,984	9,502	24,148	53,378				102,012
1963	14,891	11,935	19,924	73,484				120,234
1964	22,744	12,945	20,170	101,930				157,789
1965	21,347	9,132	29,649	113,544				173,672
1966	21,040	10,195	36,643	128,884				196,762
1967	14,870	11,697	42,198	123,304	3,350	29,610		225,029
1968	9,663	13,716	50,490	115,590	1,606	32,224		223,289
1969	11,375	14,345	51,362	92,929	1,139	31,070		202,220
1970	13,061	10,422	67,067	103,017	2,207	33,572	4,861	234.207
1971	10,123	11,525	75,791	118,563	1,699	30,993	5,711	254,414
1972	6,077	12,055	77,367	108,273	2,707	31,710	5,689	243,878
1973	5,295	12,269	81,282	113,786	1,812	29,225	5,142	248,811
1974	4,204	14,379	85,629	105,911	1,250	24,160	4,148	239,681
1975	4,692	17,691	97,774	150,922	4,063	25,073	4,353	304,568
1976	7,525	20,992	121,993	205,212	6,065	27,297	5,044	394,128
1977	10,351	25,372	156,202	203,312	7,071	24,562	7,941	434,811

[1]Excludes advertising by restaurants and grocery stores.

SOURCE: See TABLE A-1a

TABLE A-1c. ADVERTISING EXPENDITURES FOR BEER, WINE, AND LIQUOR BY MEDIA, 1962-1977[1]

(thousands of dollars)

	Magazines	Newspaper	Network Television	Spot Television	Network Radio	Spot Radio	Outdoor	Total
1962	53,943	59,131	8,767	57,836				179,677
1963	56,441	63,360	7,299	70,766				197,866
1964	58,117	66,135	15,408	78,000				217,660
1965	69,286	69,781	20,366	72,943				232.376
1966	79,192	71,122	20,007	80,937				251,258
1967	89,234	67,347	21,279	75,237	748	33,128		286,973
1968	92,997	63,978	19,674	65,816	540	31,946		274,951
1969	101,799	64,185	24,185	56,084	784	38,522		286,114
1970	97,966	65,412	30,075	66,665	661	39,569	35,042	335,390
1971	88,162	69,522	26,290	78,443	109	45,664	37,508	345,698
1972	80,953	76,285	34,345	79,155	542	54,547	38,254	364,081
1973	86,889	75,273	32,323	82,134	945	39,957	37,135	354,656
1974	103,355	77,682	42,887	78,852	3,322	31,761	39,516	377,478
1975	100,894	72,156	71,685	69,427	2,776	32,489	41,450	390,877
1976	110,873	78,478	96,312	78,186	4,086	35,823	44,887	448,645
1977	132,295	71,193	135,345	91,336	3,274	37,059	43,816	514,318

[1] Excludes advertising by restaurants and grocery stores

SOURCE: See TABLE A-1a.

TABLE A-1d ADVERTISING EXPENDITURES FOR TOBACCO PRODUCTS AND SUPPLIES BY MEDIA, 1962-1977[1]

(thousands of dollars)

	Magazines	Newspaper	Network Television	Spot Television	Network Radio	Spot Radio	Outdoor	Total
1962	33,129	21,545	88,681	29,696				173,051
1963	35,952	20,591	95,456	38,837				190,836
1964	38,208	24,954	146,828	50,164				260,154
1965	41,618	10,822	145,427	48,659				246,526
1966	39,563	16,550	161,590	51,037				268,740
1967	39,892	14,969	183,104	48,403	6,293	14,625		307,286
1968	39,440	18,992	156,787	51,297	7,122	16,218		289,856
1969	48,198	18,965	174,959	39,842	3.588	10,284		295,836
1970	64,684	19,040	162,165	50,537	2,655	10,216	5,394	314,691
1971	118,220	89,434	14,594	5,118	399	2,459	39,261	269,485
1972	94,626	98,505	15,081	7,184	52	2,934	46,381	264,763
1973	109,769	106,969	16,551	6,193	63	1,123	50,593	291,261
1974	136,656	125,400	17,998	5,707	92	684	56,860	343,397
1975	144,235	148,145	19,817	4,119	16	876	67,031	384,239
1976	161,722	200,773	20,955	4,159	35	881	79,342	467,867
1977	194,482	234,246	15,829	3,507	216	909	94,359	543,548

[1]Excludes advertising by restaurants and grocery stores.

SOURCE: See TABLE A-1a

TABLE A-2 COST TRENDS IN THE MEASURED MEDIA, SELECTED YEARS: 1967=100

	Network Television	Spot Television	Magazine	Newspaper	Network Radio	Spot Radio	Outdoor
			---Unit Cost[a]---				
1963	66	81	89	92	97	84	76
1967	100	100	100	100	100	100	100
1972	125	117	110	123	105	109	145
1975	160	145	122	160	112	125	178
1976	189	181	127	176	128	135	192
1977	223	194	136	192	141	144	207
			---Cost Per Thousand[b]---				
1963	87	97	101	93	100	89	88
1967	100	100	100	100	100	100	100
1972	105	104	112	122	96	102	130
1975	126	119	120	154	98	114	151
1976	149	147	125	169	111	122	161
1977	174	156	132	183	122	129	173

[a]Cost of a 30 second television or radio commercial, a one-page advertisement, etc.

[b]Total advertising expenditures per thousand viewers, readers, ect. using the given media

SOURCE: Broadcasting, January 10, 1972, p.16 and Advertising Age, September 29, 1977, p.87

TABLE A-3 REAL ADVERTISING EXPENDITURES FOR FOOD AND TOBACCO PRODUCTS ADJUSTED FOR MEDIA UNIT COSTS, 1967-1977 (Media Unit Price Trends 1967=100 for all media)

Year	U.S. Total	Television Total	Television Network	Television Spot	Magazine	Newspaper	Radio Total	Radio Network	Radio Spot	Outdoor
(Millions of dollars)										
1963	1325	880	397	483	244	201				
1967	1637	1054	511	543	245	198	140	23	117	1[q]
1972	1439	755	334	421	263	234	119	9	110	68
1975	1489	824	363	461	276	219	102	12	90	68
1976	1553	830	364	466	309	243	100	13	87	71
1977	1624	839	399	440	351	243	116	14	102	75
PERCENT										
1963	100	66.4	30.0	36.4	18.4	15.2				
1967	100	64.4	31.2	33.2	15.0	12.1	8.6	1.4	7.2	
1972	100	52.5	23.2	29.3	18.3	16.3	8.3	0.6	7.6	4.7
1975	100	55.3	24.4	30.9	18.5	14.7	6.9	0.8	6.1	4.6
1976	100	53.4	23.4	30.0	19.9	15.7	6.4	0.8	5.6	4.6
1977	100	51.7	24.6	27.1	21.6	15.0	7.1	0.9	6.3	4.6

1[q] Not available

SOURCE: TABLE 4 and Appendix Table A-2

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