Conglomerate Mergers in the Food Industry

By

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CONGLOMERATE MERGERS IN THE FOOD INDUSTRIES

*Willard F. Mueller**

It is always a pleasure to appear before this Subcommittee, something I have been privileged to do frequently over the past 15 years.

Your current hearings are especially timely. Conglomerate mergers have occurred with increasing frequency in recent years, and are transforming the structure of our economy in irreversible fashion. Anyone interested in maintaining a decentralized, capitalistic economy must be interested in this subject, since mergers are a unique form of corporate growth. Unlike internal expansion -- the building of new plants, creating new jobs, and developing new products -- growth by merger need not pass the market test which requires a business enterprise to better its rivals in the market place. Unfettered growth by conglomerate merger can create industrial giants virtually overnight or greatly expand already huge firms as they acquire large firms in other industries. The resulting large cumulative effect of a continuing series of such mergers is to centralize private economic planning among a few hundred enormous corporate enterprises.

Although merger-induced centralization is commonplace in much of the economy, today I will focus, as you requested, solely on developments in the food retailing and food manufacturing industries. I shall summarize very briefly the findings of several studies by my colleagues and myself covering the following subjects:

-- Market concentration trends in food retailing

-- Causes of growing concentration in food retailing

-- Market concentration trends in food manufacturing industries

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-- Causes of growing concentration in food manufacturing

-- The impact on consumers of high concentration

-- Some comments on the need to strengthen Section 7.

Concentration Trends in Food Retailing

There has been a persistent upward trend in concentration in food retailing, both nationally and in local markets.

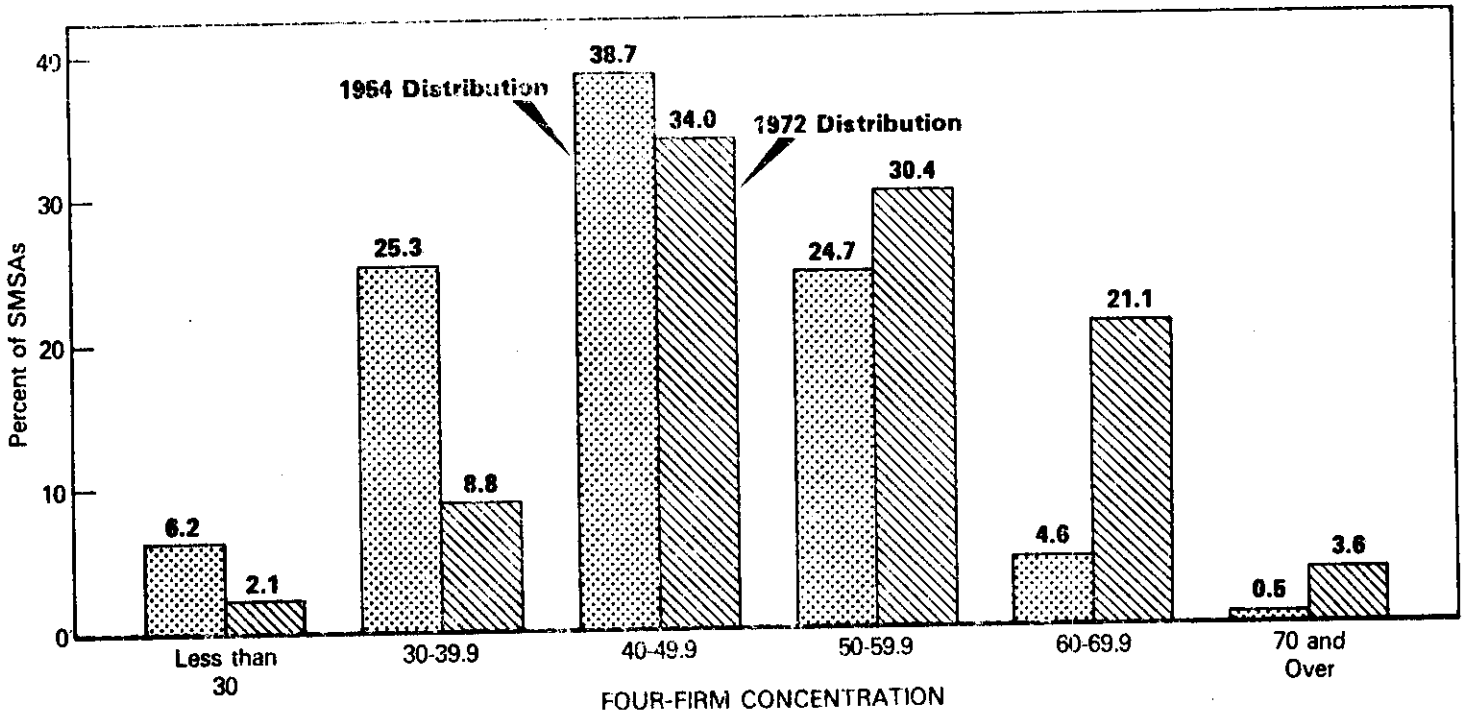
The most direct and meaningful (for consumers) measure of concentration is the share of sales held by the leading chains in individual metropolitan areas. By this measure, concentration has risen steadily in metropolitan areas since World War II. Especially significant, between 1954 and 1972 the proportion of metropolitan markets in which the top 4 chains held market shares of 60 percent or more increased five-fold -- from 5 percent to 25 percent (Figure 1). This is important to consumers because, as I shall discuss shortly, market power over prices becomes substantial when a few firms control such large market shares.

Causes of Growing Concentration in Food Retailing

For many years mergers have been widespread in food retailing (Figure 2). Until 1964 the 20 largest chains made well over half of all acquisitions measured by acquired sales. Commencing in 1965, however, acquisitions by these chains dropped precipitously, despite the acceleration in <u>total</u> acquisitions of food retailers which followed the rise in overall merger activity in 1967-1970.

This divergent merger pattern between the largest chains and all others can be explained by the vigorous enforcement of Section 7 by the FTC during

Figure 1 Percentage Distribution of Four-Firm Concentration for an Identical Sample of 194 SMSA's[a/], 1954 and 1972.



[a/] The sample is limited to those SMSA's for which the Bureau of Census calculated four-firm concentration ratios in both 1954 and 1972.

Source: Marion, Mueller, Cotterill, Geithman and Smelzer, The Profit and Price Performance of Leading Food Chains, 1970-1974, a Study prepared for the Joint Economic Committee Congress of the United States, April 12, 1977.

the 1960s.[1] However, in 1975 acquisitions by large retailers resumed as certain FTC actions were interpreted by the industry as implying that the FTC had abandoned the policy pursued during the 1960s.[2] As a result acquisitions by large chains reached a record level in 1978 (Figure 2). This trend may change once again, however, since in November 1978 the FTC challenged Grand Union's acquisition of Colonial Stores, the largest acquisition in the industry's history. It is still too early to predict future merger activity since the FTC has remained silent as to whether or not it intends to enforce the policies it adopted in the 1960s; currently several more large mergers are in the works. The FTC has not announced its enforcement intentions, although the Justice Department reportedly is investigating the proposed merger of American Stores and Skaggs Cos. -- two $1 billion-plus companies. However, the Department apparently is concerned only with potential horizontal aspects of the merger in the drug store industry.

Since the Supreme Court's Von's decision (1966) practically all large mergers involving food retailers have been conglomerates, either mergers among large chains located in different geographic markets or the acquisition of food chains by corporations outside of food retailing. The legal status of such mergers is not clear, since none of the FTC cases challenging such acquisitions have been appealed.[3] However, based on research with my colleague, Professor Ronald W. Cotterill of Michigan State University, I believe there is persuasive evidence that such mergers tend to increase market

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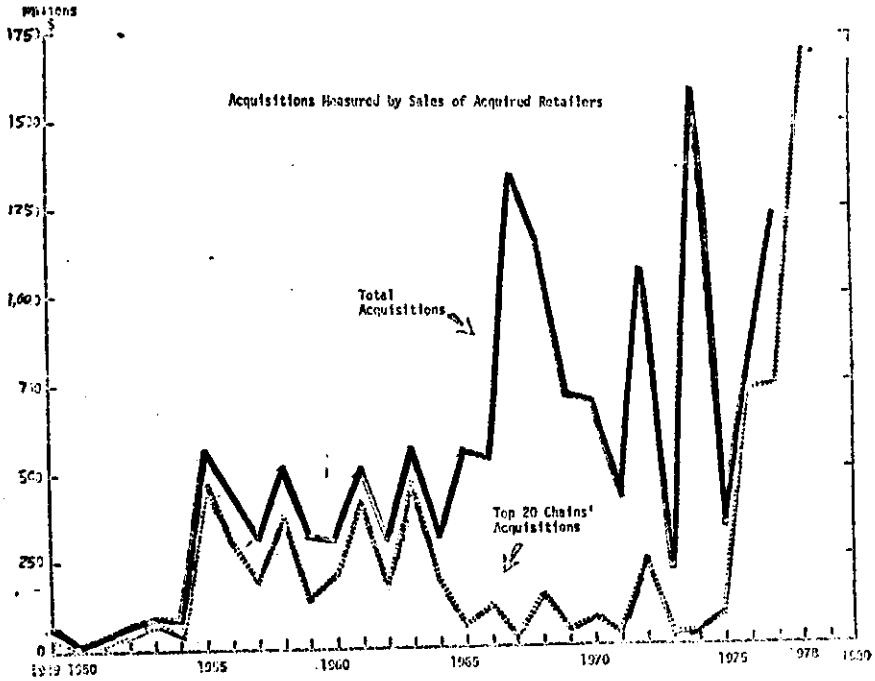
[1] In the 1960s the FTC entered agreements with six large food chains prohibiting future grocery store mergers for 10 years without prior FTC approval. It also issued in 1967 merger guidelines covering market extension mergers in grocery store distribution. FTC, Enforcement Policy with Respect to Mergers in Food Distribution, January 3, 1967.

[2] See testimony of Bruce Marion and Willard F. Mueller, Hearings before the Joint Economic Committee, March 30 and April 5, 1977, pp. 3-57, 149-164.

[3] Although the FTC has challenged several such mergers, all but one of these complaints were settled by consent decrees. The exception was the National Tea case, which involved primarily market extension mergers. The Commission's decision, National Tea Co., 69 F.T.C. 226 (1966), was not appealed by National Tea.

FIGURE 2.—Acquisitions of Food Retailers, Total and by Top 20 chains, 1949–1978



*1978 acquisitions of top 20 chains estimated as of October 1, 1978.

Source: W. F. Mueller, The Celler-Kefauver Act: The First 27 Years, study prepared for the Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, December 1978, p. 45.

concentration.[1] Our analysis found, for the period 1967-1975, that when large chains acquire their way into a market the level of concentration tends to increase. Moreover, the more large chains operating in a market the more likely is concentration to increase. We find the results disturbing. They strongly suggest the growing presence of large conglomerate firms in a market tends to increase market concentration, thus supporting the gloomy prognosis of E. G. Nourse that, "There are no demonstrable or discernable limits at which [conglomerate-induced] concentration of economic power, once fully underway, would automatically cease."[2]

Concentration Trends in Manufactured Food and Tobacco Products

My discussion of this subject will draw heavily on unpublished work of my colleague, Richard T. Rogers.

Food manufacturing comprises a number of separate industries, each with a more or less unique demand. These industries process raw agricultural products and generally sell through the same distribution systems. Despite these common features, the food manufacturing industries operate across a broad range of the competitive spectrum.

The trend in average concentration for all food manufacturing industries appears remarkably stable. Between 1958 and 1972 the average four-firm concentration for 84 food and tobacco products increased only 3.3 percentage points. But the relative stability in average concentration for all products obscure pronounced differences among various groupings of products. Figure 3 groups products by the intensity of advertising. Those products

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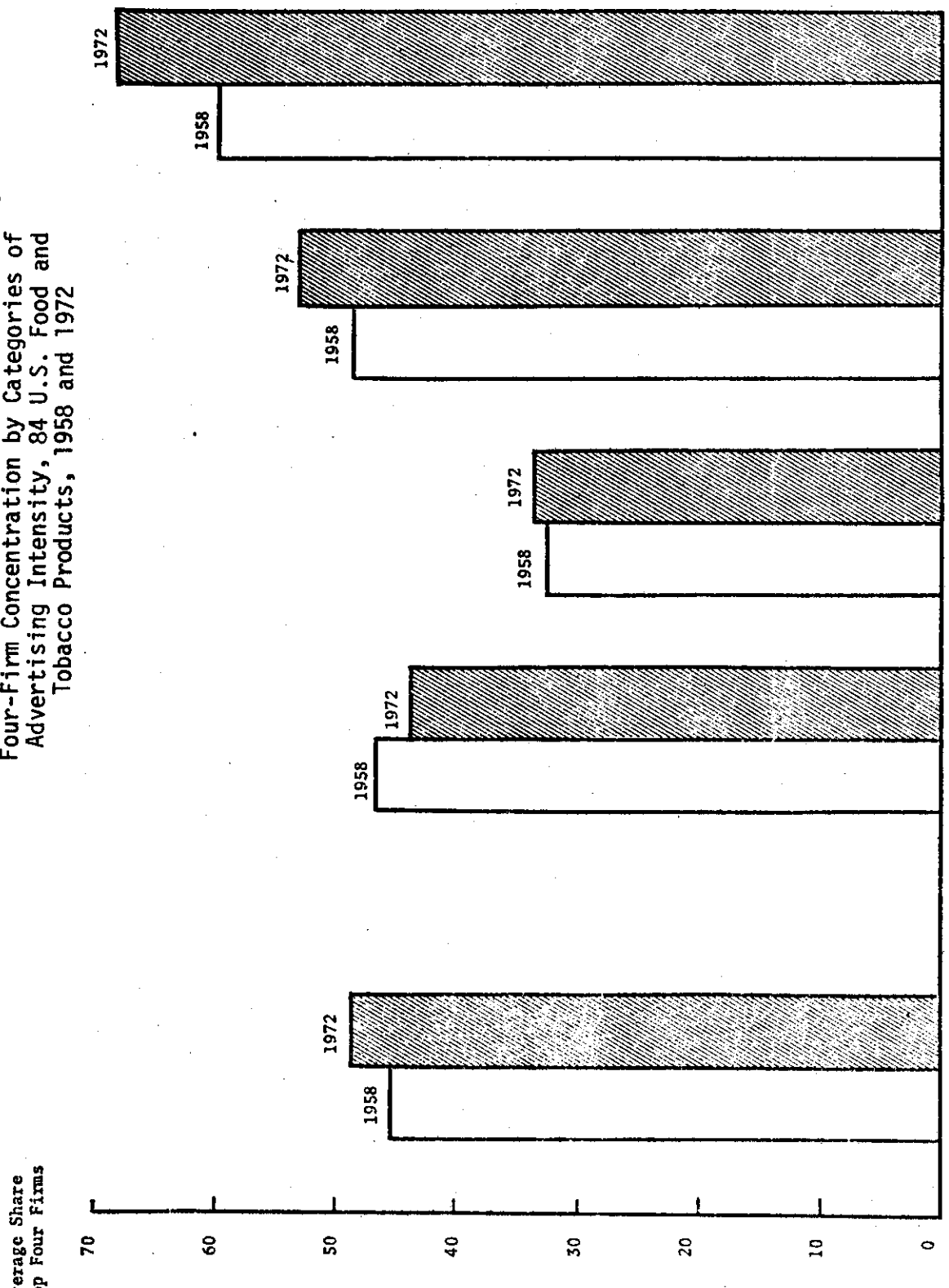
[1] Ronald W. Cotterill and Willard F. Mueller, "The Impact of Firm Conglomeration on Market Structures: Evidence from the U.S. Food Retailing Industry," 1979 (Forthcoming).

[2] E. G. Nourse, "Government Discipline of Private Economic Power," in Administered Prices: A Compendium on Public Policy, Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, U.S. Senate, p. 255.

Figure 3: Levels and Trends of Weighted Average Four-Firm Concentration by Categories of Advertising Intensity, 84 U.S. Food and Tobacco Products, 1958 and 1972



Source: Appendix Table 1.

sold with no advertising expenditures declined in concentration, whereas those products which were advertised experienced rising concentration. Not only did concentration rise most for products where advertising was most intense, but the most highly advertised products already were the most concentrated in 1958.

As shown in Table 1, by 1972 over one-half of all manufactured food and tobacco products were sold in categories which Professor Bain has classified as "high-to-moderate concentration" or greater. Our research supports Bain's conclusion that firms achieve a "substantial degree" of market power when concentration is high-to-moderate.

Table 1. Classification of Food and Tobacco Manufacturing Products According to Bain's Concentration Categories, 109 Products, 1972

Concentration Category[3]		Number of Product Classes[1] (1)	Percent of total (2)	Value of Shipments (millions) (3)	Percent of total (4)	Total Advertising[2] (millions) (5)	Percent of total (6)	Average Advertising-to-Sales (5/3) (7)
I	Very highly concentrated	14	12.8%	$12,770	13.8%	$682.5	44.9%	5.3%
II	Highly concentrated	11	10.1	4,852	5.3	57.5	3.8	1.2
III	High-to-moderate concentration	31	28.4	21,608	23.4	581.3	38.3	2.7
IV	"Low-grade" oligopolies	39	35.8	26,268	28.5	167.0	11.0	0.6
V	Unconcentrated	14	12.8	26,715	29.0	30.4	2.0	0.1
All Categories		109	100.0%	$92,213	100.0%	$1,518.7	100.0%	1.6

[1] All five-digit 1972 product classes (in the two-digit Standard Industrial Classification (SIC) Major Groups 20 (food) and 21 (tobacco) excluding 12 local market industries (in SICs 2024, 2026, and 2051). The 109 product classes account for 88.4% of total 1972 value of shipments for SICs 20 and 21.

[2] Advertising expenditures on eight-measured media in 1967. See footnote 2, appendix table 1 for source and further explanations.

[3] The types are defined in Bain, Industrial Organization, 1968, as: Type I has an eight-firm concentration ratio (CR8) of 90 percent or more or a four-firm concentration ratio (CR4) of 75 percent or more; Type II has CR8 of 85-90 percent or CR4 of 65-74 percent; Type III has CR8 of 70-84 percent or CR4 of 50-64 percent; Type IV has CR8 of 45-69 percent or CR4 of 35-49 percent; Type V has CR8 of 44 percent or less or CR4 of 34 percent or less.

Source: U.S. Bureau of the Census, Census of Manufactures, 1972, Special Report Series, Concentration Ratios in Manufacturing, MC72 (SR)-2.

Causes of Changing Concentration in Food Manufacturing

The concentration pattern in Figure 3 suggests that advertising intensity plays a role in changing concentration. Our study of this relationship indicates that the advantages that large firms enjoy from television advertising are a primary cause of increasing concentration in all consumer goods products, including food products, that lend themselves to such advertising.[1/] But more than economies of large-scale advertising are responsible for increasing concentration. A major force in my opinion is predatory advertising by large conglomerate firms. Typically, when a large conglomerate acquires a firm in a functionally related industry, it increases substantially the amount of advertising of the acquired company's products.[2/] Often the acquiring conglomerate uses its huge profits earned in other lines to subsidize the advertising and expansion of the acquired company. I testified before this committee May 12, 1978, concerning the consequences of Philip Morris' subsidized expansion of the Miller Brewing Co. following its acquisition in 1970.[3/] Subsequent events have not changed my views on this subject, although in December 1978 the FTC published a staff report on the brewing industry that completely dismisses the notion that this conglomerate merger affected concentration in brewing. Time does not permit a critique of the FTC report, which largely involves rationalization of events in brewing rather than an analysis of their causes. With your permission I would like to submit for the record some prepared comments on the report. Suffice it to say here that nearly everyone in the industry

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1/ See Willard F. Mueller and Richard T. Rogers, "The Role of Advertising in Changing Market Structure" (Forthcoming in the Review of Economics and Statistics).

2/ Loys L. Mather, "The Impact of Acquisitions by Diversified Firms on Product Differentiation Activity," paper presented at the American Agricultural Economics Association, August 2, 1977, p. 27.

3/ Willard F. Mueller, Recent Structural Changes in the Beer Industry, Hearings on Conglomerate Mergers, Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, U.S. Senate, May 12, 1978.

seems to concede Philip Morris' subsidized expansion of Miller is responsible for much of the increased concentration of recent years. Only the FTC's staff report seems unaware of what is going on in the real world.

I have already discussed elsewhere the way in which the huge Procter & Gamble Company has used its enormous resources to expand the Folger Coffee Company's market position following its acquisition in 1963.[1/] Testimony given at your hearings last Friday, March 30, 1979, appears consistent with my findings that P&G used its financial and advertising prowress to crush regional coffee roasting companies as it expanded its market position east of the Mississippi.

The Philip Morris-Miller and Procter & Gamble-Folger examples illustrate how vast financial resources coupled with modern advertising techniques can be used to conquer the less powerful, yet economically efficient firms. The end results are increased concentration and dominance, followed by their inevitable concomitants -- higher prices to consumers.

Conglomerate mergers among grocery product companies reached record levels in 1978. Although the final tally is not in, seven of the largest such mergers announced during the first nine months of 1978 had combined assets of about $2 billion, far surpassing any previous year. Only one of these was challenged, Beatrice Foods' acquisition of Tropicana. This recent acceleration of merger activity among food manufacturers can be traced in part to the FTC's enforcement policy. In November 1976 it rescinded the Grocery Product Merger Guidelines which it promulgated in 1968,[2/] thereby giving the industry a green light for conglomerate product-extension mergers in these industries. Several of the recent mergers clearly would have violated the FTC's grocery product guidelines, especially R. J.

[1/] Mueller, The Celler-Kefauver Act: The First 27 Years, A Study prepared for the use of the Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, House of Representatives, December 1978, pp. 57-61.

[2/] FTC Enforcement Policy with Respect to Product Extension Mergers in Grocery Products Manufacturing, May 15, 1968.

Reynolds' acquisition of Del Monte Corp. and Pillsbury's acquisition of Green Giant.

Significance of Concentration Trends

Although concentration is not the only source of market power, it is the best single index of such power as confirmed by a large number of studies. Our studies in food retailing show that, when other things are held constant, prices of large grocery chains are about 5.3 percent higher in metropolitan areas where four firms control 70 percent of sales than in those where they hold about 40 percent of sales (Table 2).[1/] Another source of power is dominance, that is, the relative market share held by the leading one or two chains in a market. For example, if a chain holds a 25 percent market share in a market where four firms control 50 percent of sales, its prices will be about 3.5 percent higher than a chain that holds a 5 percent share in such a market. Table 2 summarizes the estimated prices of large chains in metropolitan areas with different combinations of four-firm concentration and relative firm dominance (relative firm dominance is measured by a chain's share relative to the top 4 chains' share).

In view of these findings, the earlier observations concerning rising concentration have important implications for consumers. The stakes are enormous: each 1 percent increase in grocery store prices cost consumers over $1,500,000,000 annually. A study conducted for the Joint Economic Committee found that overall monopoly overcharges in food retailing in 1974 were still relatively modest (about $660 million in 1974) compared to the monopoly overcharges of food manufacturers as found by Connor and Parker.

[1/] Some food industry spokesmen have criticized these findings. However, over 20 independent economists who have reviewed the study are in substantial agreement with the results. See Hearings on Prices and Profits of Leading Retail Food Chains, 1970-74, before the Joint Economic Committee, Congress of the United States, March 30 and April 5, 1977, pp. 185-214.

Table 2 - Estimated Index of Grocery Prices and Pretax Profit-to-Sales Ratios Associated with Various Levels of Market Concentration and Relative Firm Market Share

	4-Firm Concentration ration (CR_4)			
	40	50	60	70
	Index of Large Food Chain Prices			
Relative firm market share (RFMS):				
10	100.0	101.0	103.0	105.3
25	100.8	101.8	103.7	106.1
40	102.4	103.4	105.4	107.7
55	103.6	104.5	106.5	108.9

Source: Marion, et. al., p. 3

However, overcharges in food retailing were substantial in the most highly concentrated markets, and a continuation of recent trends in concentration threatens to cost consumers billions of dollars in the 1980s.

Our analysis shows that profits of a food manufacturing firm are influenced significantly by the level of concentration in the markets in which it operates, the relative dominance of the food manufacturing firm in its markets, and the intensity of advertising in the industries in which it operates. Tables 3 and 4 display these relationships when all other variables used in our statistical analysis are held constant. Table 3 shows the estimated net profits on stockholders equity received by food manufacturing firms with different relative market shares (the firm's share as a percent of the top 4 firms' share) and different levels of industry concentration. For example, a firm with a relative market share of 15 operating in a market where 4 firms hold 30 percent of sales would have earned estimated net profits on equity of 7.8 percent (Table 3). In contrast, a firm with a relative market share of 60 operating in a market where 4 firms controlled 80 percent of sales would have enjoyed a net profit rate of 18.6 percent. The results of other combinations of relative market share and industry concentration are shown in the table.

Table 4 displays the estimated net profit rates of various combinations of industry concentration and industry advertising intensity. The relative impact of concentration on net profits is, of course, the same as in Table 3. However, the table also shows how profits rise as industry advertising intensity rises.

The preceeding illustrates the extent to which these three so-called elements of market structure -- market concentration, relative firm dominance, and industry advertising intensity -- influence firm profitability in food manufacturing. While we can show only two variables in a single

Table 3 Estimated Average After-Tax Profits as A Percent of Stockholders' Equity of Grocery Manufacturing Firms with Various Relative Market Shares and Operating in Markets with Various Levels of Market Concentration

Relative firm market share (RFMS)	4-firm product concentration (CR_4)					
	30	40	50	60	70	80
	Net income as percent of equity					
15	7.8	8.6	9.5	10.3	11.1	12.0
30	10.0	10.9	11.7	12.5	13.3	14.2
45	12.2	13.1	13.9	14.7	15.6	16.4
60	14.5	15.3	16.1	16.9	17.8	18.6

Note: The net profit rate estimates at various levels of CR_4 and RFMS were calculated using equation 4, Table 2, appendix D of the source cited below, when all other variables were introduced at their mean values.

Source: Richard T. Rogers in W.F. Mueller, The Celler-Kefauver Act, op. cit. p. 188.

Table 4 Estimated Average After-Tax Profits as A Percent of Stockholders' Equity of Grocery Manufacturing Firms Operating in Industries with Various Levels of Market Concentration and Industry Advertising Intensity, 1964-67

Product class Advertising-to-sales Ratio (IAS) (%)	4-firm product concentration (CR_4)					
	30	40	50	60	70	80
	Net income as percent of equity					
0	8.5	9.3	10.1	10.9	11.8	12.6
2	9.0	9.9	10.7	11.5	12.4	13.2
4	9.6	10.4	11.3	12.1	12.9	13.7
6	10.2	11.0	11.8	12.7	13.5	14.3
8	10.7	11.6	12.4	13.2	14.0	14.9
10	11.3	12.1	13.0	13.8	14.6	15.4
12	11.9	12.7	13.5	14.4	15.2	16.0

Note: The net profit rate estimates at various levels of CR_4 and IAS were calculated using equation 4, Table 2, appendix D, from the source cited below, when all other variables were introduced at their mean values.

Source: Richard T. Rogers in W.F. Mueller, The Celler-Kefauver Act, op. cit., p. 188.

table, it is possible to estimate from a statistical equation how profits vary with different combinations of these three structural variables, holding other things constant. For example, the estimated net profit rate of a food manufacturing firm would be 6.3 percent if it had a relative market share of 10, operated in an industry where four firms controlled 30 percent of sales, and in which there was no advertising. In contrast, a firm would enjoy a net profit rate on equity of 23.6 percent if the firm had a relative market share of 70, operated in an industry where four firms controlled 90 percent of sales, and the industry spent 12 percent of sales on advertising. The latter combination, which results in net profits nearly four times greater than the former, illustrates how certain combinations of these factors can confer very substantial power in food manufacturing. I shall leave to Drs. Connor and Parker the discussion of the impact of such power on consumers, although it is obviously substantiated.

Overall Merger Enforcement in the Food Industries

Table 5 summarizes the 64 merger complaints challenging acquisitions of food and other grocery product companies. The most active areas were food distribution, dairy and beer, where 28 (44 percent) of the complaints occurred. The table also summarizes these acquisitions by type of merger. Fully 43 (67 percent) were horizontal. At the other extreme, no pure conglomerate mergers were challenged, although a good many such large mergers occurred. Appendix 3 summarizes these mergers complaints by size of the acquiring firm.

Table 5. Merger Complaints in Food and Other Grocery Products by Industry Categories, 1951-1977

Industry	Number of Complaints (1)	Number of Acquisitions Challenged (2)	Assets of Challenged Acquisitions (millions) (3)	Sales of Challenged Acquisitions (millions) (4)	Number of Large Acquisitions Challenged[1/] (5)	Type of Acquisition[2/] H (6)	V (7)	ME (8)	PE (9)	C (10)
Food Distribution	12	45	$501	$1,398	8	9	0	3	0	0
Dairy	7	406	$286	$1,032	6	3	1	3	0	0
Beer	9	9	$177	$ 414	6	7	1	1	0	0
Other Food & Grocery Manufacturing	36	68	$985	$2,476	23	24	1	1	10	0
Total	64	528	$1,949	$9,042	43	43	3	8	10	0

[1/] $10 million or more in assets.

[2/] Type of acquisitions: H=horizontal; V=vertical; ME=market extension; PE=product extension; C=pure conglomerate.

Source: Based on data used by Mueller in, The Celler-Kefauver Act, op. cit.

Conclusion: The Need for New Legislation

Competition is declining in the food manufacturing and retailing industries, and conglomerate mergers are partially responsible. After examining merger enforcement efforts in food and other industries, I am persuaded that the Celler-Kefauver Act of 1950 has done next to nothing about conglomerate mergers.[1/] Nor is it likely to in the future. Very probably more such mergers could be challenged under the law than have been in the past. But the evolution of case law in this area could, under the best of circumstances, take another two decades. Lest you think I exaggerate, recall that the first two conglomerate merger cases -- Consolidated Foods and Procter & Gamble -- to reach the Supreme Court were challenged 22 years ago. Very simply, I do not think we can wait until the year 2001 before acting on this matter. Before then the economy will have become unacceptably centralized.

I therefore support enthusiastically the objective of S. 600. Based on my study of the Celler-Kefauver Act, I believe the only effective way to block most large conglomerate mergers is through the general approach embraced by S. 600, i.e., the presumption that large conglomerate mergers are illegal unless certain affirmative defenses are made by the merging parties.

Some of the above evidence provides strong support for Sec. 2(c), which prohibits corporations with assets or sales exceeding $350 million from acquiring companies with market shares of 20 percent or more in any significant market. We saw that firms with large market shares in both food retailing and food manufacturing tend to have significant market power, that is, power over prices and profits. When such dominant market share

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[1/] Mueller, The Celler-Kefauver Act, op. cit.

firms are acquired by large conglomerates there is a high probability that the acquired firm's position will be further enhanced, thereby adding to its already advantaged position vis-a-vis less powerful rivals.[1/] The result likely will be further entrenchment of the dominant firms, and ultimately still higher prices to consumers. Although there are legal precedents for challenging such mergers, the standards of proof are so high as to prevent virtually all successful challenges. S. 600 would make it possible to reach these particularly offensive mergers.

While endorsing the general approach of S. 600, I believe several changes should be made to better insure achievement of its objectives.

Most important, the bill should spell out explicitly the procedures to be followed in deciding whether or not a party has made an adequate affirmative defense. One procedure would be for the FTC to hold a public hearing on this issue, at which the defendant, Justice Department, other relevant government agencies, and the public were permitted to present evidence. At the end of such proceeding the FTC should be required to make a formal finding explaining its reasons for approving or denying the merger. Such a procedure would insure that antitrust agencies account publicly for their acts, thereby minimizing suspicions of improprieties in the administration of justice such as have arisen in the recent past. The ignominous ITT merger settlement teaches the importance of public disclosure of the bases for agency decisions.[2/]

I also have problems with Sec. 3(a)(2), which provides an affirmative defense if "the transaction will result in substantial efficiencies." The trouble with this section, which might become known as "the economists' full

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[1/] Shepherd and Campbell, "Leading Firm Conglomerate Mergers," Antitrust Bulletin, Winter 1968, pp. 1361-82.

[2/] W.F. Mueller, "The ITT Settlement: A Deal with Justice?" Industrial Organization Review, Vol. 1, No. 1, 1974.

employment act," is that in some industries a plausible case could be made that advertising savings would result when two large conglomerates merge or when a large conglomerate acquires a smaller firm with a large market share. For example, the Phillip Morris-Miller and P&G-Folger mergers might have passed this "efficiencies" test based on the kind of reasoning found in the FTC's recent staff report on the beer industry. Quite apart from any efficiencies resulting from it, the public would not benefit if the cost savings merely enriched the acquiring firm. Thus the objectives of the act would be better served if it permitted an efficiencies defense only if it could be demonstrated that the benefits of the increased efficiencies would be passed on to consumers.

Finally, I believe there is a loophole in Sec. 2. Frequently the book value of acquired companies understates the true value of their assets. For example, in 1978 Beatrice Foods paid $490 million for Tropicana Products, whereas in 1977 Tropicana had sales of $245 million and assets of $131 million. The assets figure obviously understated the true value of Tropicana's assets. Since this is a rather common situation, I believe Sec. 2 should include as another size standard the consideration paid for the acquired company's equity, plus the value of non-equity liabilities assumed by the acquiring companies.

Thank you for the opportunity to appear before you on this important matter.

Appendix Table 1. Weighted Average Four-Firm Concentration Ratios By Categories of Advertising Intensity for 84 U.S. Food and Tobacco Product Classes, 1958 to 1972

Year	All Product Classes[1] N=84	Product Classes' Advertising-to-sales Ratio[2] (mean A/S for category) 0 (0) N=29	0 to 1% (0.5) N=19	1 to 3% (1.8) N=14	Greater than 3% (7.1) N=22
1972	48.6%	43.8%	33.5%	52.9%	67.9%
1967	45.7	43.5	30.8	51.1	63.0
1963	44.9	44.5	30.5	48.3	61.4
1958	45.3	46.5	32.5	48.2	59.5
Change					
1972-1958	+3.3	-2.7	+1.0	+4.7	+8.4

[1] All 5-digit product classes in the two-digit Standard Industrial Classification (SIC) Major Groups 20 (food) and 21 (tobacco) where the data are comparable from 1972 to 1958, excluding 10 local market product classes (in SICs 2024, 2026, and 2051). These 84 product classes account for 71% of the total value of shipments of SICs 20 and 21.

[2] The advertising-to-sales ratio (measured in percent) are constructed from each product class' advertising expenditures in eight measured media for 1967 and its 1967 value of shipments. The basic advertising data were prepared by the late Robert Bailey of the Federal Trade Commission. For a more complete discussion of the data see Mueller and Rogers, "The Role of Advertising in Changing Market Concentration," forthcoming in The Review of Economics and Statistics or available as Working Paper No. 17, May 1978, from N.C. Project 117, Studies of the Organization and Control of the U.S. Food System, Madison, Wisconsin.

Note: The weighted average four-firm concentration ratios are weighted by each product class' value of shipments in 1972.

Source: Concentration ratios and value of shipments are from the U.S. Bureau of the Census, Census of Manufacturers, 1972, Concentration Ratios in Manufacturing, MC72 (SR)-2.

Appendix Table 2. Weighted Average Four-Firm Concentration Ratios By Categories of Advertising Intensity for 57 U.S. Food and Tobacco Product Classes, 1954 to 1972

Year	All Product Classes[1] N=57	Product Classes' Advertising-to-sales Ratio[2] (mean A/S for category) 0 (0) N=15	0 to 1% (0.5) N=13	1 to 3% (1.8) N=11	Greater than 3% (7.7) N=18
1972	47.1%	40.4%	27.9%	50.2%	70.1%
1967	43.7	39.5	24.5	47.6	65.5
1963	43.5	41.7	24.7	45.0	64.4
1958	44.3	44.4	27.8	44.0	62.4
1954	46.6	48.0	32.8	45.7	61.6
Change					
1972-1954	+0.5	-7.6	-4.9	+4.5	+8.5

[1] All 5-digit product classes in the two-digit Standard Industrial Classification (SIC) Major Groups 20 (food) and 21 (tobacco) where the data are comparable from 1972 to 1954, excluding 7 local market product classes (in SICs 2024, 2026, and 2051). These 57 product classes account for 59% of the total value-of-shipments of SICs 20 and 21.

[2] The advertising-to-sales ratio (measured in percent) are constructed from each product class' advertising expenditures in eight measured media for 1967 and its 1967 value of shipments. The basic advertising data were prepared by the late Robert Bailey of the Federal Trade Commission. For a more complete discussion of the data see Mueller and Rogers, "The Role of Advertising in Changing Market Concentration," forthcoming in The Review of Economics and Statistics or available as Working Paper No. 17, May 1978, from N.C. Project 117, Studies of the Organization and Control of the U.S. Food System, Madison, Wisconsin.

Note: The weighted average four-firm concentration ratios are weighted by each product class' value of shipments in 1972.

Source: Concentration ratios and value of shipments are from the U.S. Bureau of the Census, Census of Manufacturers, 1972, Concentration Ratios in Manufacturing, MC72 (SR)-2.

Appendix Table 3. Merger Complaints Involving Food and Other Grocery Products, by Size of Acquirer and Amount of Acquired Assets, 1951-1977

Asset Size of Acquiring Company	Total All Products		Food Distribution		Dairy		Beer		Other Grocery Manufacturing	
(millions)	Number	Assets Acquired (millions)	Number	Assets Acquired (millions)	Number	Assets Acquired (millions)	Number	Assets Acquired (millions)	Number	Assets Acquired (millions)
$1,000 and greater	4	$ 180	0	0	-	-	-	-	4	$180
250 to 1,000	16	485	3	$995	2	$107	1	$ 35	10	244
100 to 250	20	965	5	355	2	351	4	79	9	190
50 to 100	7	160	0	0	1	45	2	63	4	52
under 50[1/]	19	149	4	468	3	23	3	35	9	44
Total	66	$1,948	12	$501	8	$526	10	$212	36	$710

[1/] Includes 2 companies for which asset information is not available.

Source: Based on data used in Mueller, The Celler-Kefauver Act, op. cit.