FOOD MARKETING IN THE UNITED STATES —  
A REVIEW ARTICLE

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Between 1964 and 1966 a very detailed study of food distribution in the United States was undertaken by the National Commission on Food Marketing. In this article an attempt is made to set out the main findings of the Commission and to evaluate them. This study was undertaken primarily to examine whether the growing margin between the prices consumers pay and the prices farmers receive in the United States was justified and if not how it could be reduced. The Commission concluded that the growth in this margin was, by and large, justified: that food processors and retailers were technically progressive and earning mostly profits which were comparable with those in other sectors of the economy. A majority of the Commission was critical of excessive advertising expenditures in the marketing and distribution of food. The Commission assembled a sizable staff to provide a detailed picture of present trends; in addition they undertook some useful analyses of the profitability of different sections of the food marketing and retailing industries and of the factors which affect such profitability.

1 INTRODUCTION

The purpose of this paper is to summarize for Australian readers the major findings of the National Commission on Food Marketing in the United States, and to comment on the various policy issues raised in the Commission's report1. The National Commission on Food Marketing (N.C.F.M.) was created by Congress in July 1964 to report on the performance of the nation's food marketing system, on the changes which took place in the post-war period, and on future prospects. The fifteen member committee included a chairman from the judiciary, ten members of the U.S. Congress, and four processors, distributors and farmers. It assembled a staff of professional research workers under the leadership of Dr George Brandow, a former president of the American Farm Economic Association. In addition to the main report of the Committee, Brandow's team published a series of ten technical studies dealing with

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different aspects of the U.S. food marketing system. The Committee's reports were published in June 1966 and succeeding months. They represent the most detailed study of food marketing in the United States which has yet been attempted. As economic developments in the United States often foreshadow those in other countries, including Australia, it seems worthwhile to examine current trends in the United States as a possible pointer to future trends in food marketing elsewhere.

The particular issue which led to the setting up of the N.C.F.M. was a rather narrow one, namely, the allegation that the drop in farm prices for beef in 1964 was not passed on to consumers in the form of lower retail prices. More general charges that food was rapidly becoming "the captive" of a few large corporations provided a general climate conducive to this searching investigation.

2 MAJOR POST-WAR CHANGES IN U.S. FOOD MARKETING

2.1 THE COST OF DISTRIBUTING THE "MARKET BASKET"

The U.S. Department of Agriculture publishes price statistics for a collection of 62 foods combined according to the amounts of these foods purchased in 1960-61 by wage earners and others. This is called the "market basket". The farm-retail price spread of the market basket is the most commonly cited measure of the cost of food marketing. The retail value of the market basket rose from $U.S. 870 in 1950 to $1,042 in 1965, while the farm value of this collection of products remained static at $409, i.e., the farm-retail price spread rose from $461 to $633, a rise of 37 per cent.

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2 The titles of the technical studies are:
No. 1 Organization and Competition in the Livestock and Meat Industry.
No. 2 Organization and Competition in the Poultry and Egg Industries.
No. 3 Organization and Competition in the Dairy Industry.
No. 4 Organization and Competition in the Fruit and Vegetable Industry.
No. 5 Organization and Competition in the Milling and Baking Industries.
No. 6 Studies in Organization and Competition in Grocery Manufacturing.
No. 7 Organization and Competition in Food Retailing.
No. 8 The Structure of Food Manufacturing.
No. 9 Cost Components of Farm-Retail Price Spreads for Foods.
No. 10 Special Studies in Food Marketing.
   - Private label products in food retailing.
   - Retail food prices in low and higher income areas.
   - Notes on economic regulation.

3 However, a more detailed investigation by the Committee showed that the upward trend in the farm-retail price spread in recent years had been greatly overstated—mainly because the Bureau of Labor Statistics retail price data did not fully reflect price specials on meat. New estimates for 1964 led to a downward revision of the beef price-spread by 20 per cent. The factors leading to this over-estimation of retail prices are of some interest. Advertised price specials are usually offered during Thursdays, Fridays, and Saturdays, when most retailers' food sales are made. "Specialising" a product often leads to a very substantial rise in sales volume. On the other hand, the Bureau of Labor Statistics collects retail food prices on Tuesday, Wednesday, and Thursday of the enumeration week and ordinarily the Bureau does not weight prices of foods on special sale to reflect the volume sold. This apparently minor discrepancy has—at certain times—led to a large overstatement of "true" retail prices. Cf. Technical Study No. 9, p. 5.
The Commission points out that popular "tests" of whether the food marketing system works well or not are not really very enlightening. Thus, the decline in the farmers' share of consumers' "market basket" expenditures (1950—47 per cent; 1965—39 per cent) does not necessarily mean that the food marketing system is performing badly. The reason for the decline may be a difference in the "possible" rate of technological improvement in the farm and marketing sectors respectively, or it may be the result of an increase in the quantity of services provided by the marketing system. All that can be said is that the increase in the farm-retail price spread of 37 per cent over a 15 year period is very similar to the increase in prices in the economy over this period—i.e. the "real" cost of food marketing has remained constant.

In essence the Commission's assessment of the performance of the food marketing industry is made by asking three questions: "(a) Are the functions for which marketing costs are incurred necessary ones? (b) Are the functions efficiently performed? (c) Are profits reasonable? If the answer in each case is 'yes', then the price spread is justified and the industry is performing well in this respect. The questions can be answered only by detailed examination of the industry." A summary of their findings coupled with comments on their conclusions are given below.

2.2 Individual Products

Meat

The three major changes in the marketing of meat have been: (a) decentralization of slaughtering or packing plants, coupled with a marked decline in concentration, i.e., the proportion of output produced by the largest firms, (b) a decline in the use of terminal markets, and (c) the growth of large cattle feed lots (i.e., with a capacity of 1,000 head or more).

(a) Improvements in road transportation contributed to the declining concentration of meat packing. They provided an opening for new firms to construct meat works in production areas. Since about a third of the live weight of meat animals is lost in slaughtering, transport costs

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* It is difficult, if not impossible, to measure the quantity of services provided by the food marketing system in any country. However, there are some indications that the "quantity of services" in the "market basket" has risen over the post-war period. For instance, the proportion of supermarkets open in the evening and on Sundays has increased substantially. In fact, an Australian visitor cannot help but be amazed at the very long trading hours of U.S. food retail establishments. In 1965, 70 per cent of all U.S. supermarkets were open at least six evenings a week, and 38 per cent were open on Sundays. Cf. Technical Study No. 7, pp. 275–6.


* The percentage of output accounted for by the largest four firms declined from 52 per cent in 1950 for beef to 28 per cent in 1964; for calves the respective figures are 58 per cent and 44 per cent respectively; for sheep 70 and 62; for pigs 49 and 37. Cf. Technical Study No. 1, p. 14.
were reduced by re-locating plants. Wage rates were also frequently lower in these districts. The wide use of Federal grades for beef made it easier for new firms to compete on equal terms with packers whose names were known.

(b) The decentralization of slaughtering has reduced the importance of the traditional terminal markets; these now account for less than a third of the livestock purchased by packers; typically packers now buy directly from producers or through country buyers. The growth of direct purchasing has probably reduced costs though it has raised some problems; thus, sellers can be less certain of having obtained the best price possible. Also, terminal market prices—which are widely reported and used for many commercial transactions—represent a decreasing fraction of total livestock trading.

(c) An increasing proportion of beef consumed in the United States comes from beef cattle which have been fattened by concentrate feeding before slaughter. There has been a spectacular growth in the larger feed lots. This is probably attributable in the main to substantial economies of size which the larger feed lots have been able to achieve. The large feed lots are owned mainly by specialized cattle feeders or farmers, though meat packers and buyers own about 15-20 per cent of total feed-lot capacity. Large feed lot owners often contract feed for farmers and meat packers, but own about 60 per cent of the cattle fed.

POULTRY AND EGGS

The spectacular improvements in U.S. production techniques for broilers have been widely discussed. Briefly, since World War II, the quantity of feed required to produce 1 pound of chicken meat has been halved; average mortality has been reduced by 70 per cent; broiler output per man per year has risen from about 16,000 in the early fifties to 80,000 in the mid sixties. Sizable, though somewhat smaller improvements have been made in the technology of egg and turkey production. As a result, there has been a sharp decline in retail prices of poultry meat, and per caput consumption has risen greatly.

The rapid adoption of the new technology was hastened by contract integration. An increasing proportion of production comes from farmers under contract to large diversified feed companies, meat packers, and specialized poultry firms. This trend has gone farthest for broilers.

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2 In addition, packers purchase 13-19 per cent of their requirements of cattle, sheep, and hogs at auction markets. However, auction markets are the most important source of supply in the case of calves. *Ibid.*, p. 3.
3 The proportion of cattle fed concentrates rose from 42 per cent in 1955 to 56 per cent in 1964. (These figures relate to the 39 states where beef production is most important.) Cf. *ibid.*, p. 109.
5 A growing proportion of cattle slaughtered by packers appears to be owned by them for some weeks before slaughter; however, the proportion is probably still below 20 per cent; in addition, three major food chains feed and slaughter some of their own cattle. Cf. *ibid.*, p. 103.
6 On the other hand, per caput egg consumption has been declining consistently in spite of a reduction in real egg prices.
where less than 30 per cent of production is now grown without a prior contractual arrangement\textsuperscript{13}. In 1964 more than half the U.S. turkey and egg production was still grown without contracts, but the proportion has been diminishing every year since 1960\textsuperscript{14}.

Why are contract operations becoming more predominant rather than, for instance, the establishment of large scale businesses run with hired labour? The answer appears to be that many underemployed farmers with facilities available were able to do the job more cheaply and perhaps better than hired labour could have. These underemployed farmers are largely situated in the Southeast of the United States where production of broilers and, to a much lesser extent of turkeys and eggs, is becoming concentrated\textsuperscript{15}. There is a wide variety of contracts; over time the trend has been for integrators to assume increasing managerial functions, and growers to relinquish entrepreneurial control in more and more directions.

With an increasing proportion of poultry products produced under various forms of vertical integration, prices for live birds are no longer established in terminal markets or at auction. Consequently, the U.S. Department of Agriculture has had to discontinue its broiler live-price quotations: this has left the broiler processors without the live-price quotation usually adopted when they made contracts with their suppliers. Instead contract prices are being tied to U.S.D.A. ready-to-cook broiler price quotations.

Concentration in the poultry processing industry is generally low, the largest eight firms accounting for only 20 per cent of total output in 1963; however, there is some evidence of increasing concentration since 1960. Although output is rising, the number of processing plants is declining. Since a large proportion of plants are too small to achieve least-cost output rates, this trend will probably continue.

To escape from the extremely competitive conditions and generally low returns on capital in chicken processing\textsuperscript{16}, some of the larger firms aim to establish brand images for further-processed chicken meats (e.g., selling packages of frozen chicken legs or pre-cooked chicken dinners). Although this trend is increasing, only 5 per cent of broilers are at present sold as further-processed meat items.

\textsuperscript{13} This compared with almost 60 per cent 5 years earlier—in 1959. Cf. Technical Study No. 2, p. 5.
\textsuperscript{14} Ibid., pages 7 and 9.
\textsuperscript{15} The 5 top broiler producing states (Georgia, Arkansas, Alabama, North Carolina, and Mississippi) accounted for 60 per cent of total U.S. production in 1965 (compared with 27 per cent in 1950), 20 per cent of U.S. egg production (7 per cent in 1950) and 12 per cent of turkey production (4 per cent in 1950). The greater concentration in the case of broilers is partly due to the higher feed/product conversion ratios for turkeys and eggs; as these decline, production will probably become more concentrated in the Southeast. The Southeastern states' competitive advantage was also enhanced by substantial reductions in freight rates on feed in the early 1960's.
\textsuperscript{16} For the 6 years ended 1964, net income after taxes averaged 7.7 per cent of net worth for 17 specialized chicken processors whose figures were obtained in a N.C.F.M. survey. Cf. Technical Study No. 2, p. 59.
DAIRYING

In contrast to poultry meats, the per capita consumption of milk and most dairy products has been declining in the post-war period. About half the milk produced is consumed in the form of manufactured dairy products (butter, cheese, frozen products, condensed products) and the remainder as fluid milk, cream, etc. Fluid milk prices are generally regulated under various Federal Milk Marketing Orders and a variety of state regulations. Federal Milk Marketing Orders specify minimum prices to be paid to farmers for milk used for different purposes. In addition, twenty States regulate milk prices at the farm level and thirteen also set minimum wholesale and/or retail prices.

Fluid milk marketing has changed appreciably over the post-war period. Bulk handling on farms and bulk transportation to factories are replacing the use of cans. Processing and packaging have been largely automated. Paper containers and, more recently, plastic ones have been substituted for glass bottles. Home delivery of milk has declined and store sales now account for the bulk of fluid milk purchases.

Partly because non-returnable containers have widened distribution areas, the optimum size of processing plants has increased greatly. The number of small processing plants (below 4,000 quarts per day) has declined by 70 per cent since 1950, while plants processing 40,000 quarts or more a day have increased by 60 per cent.

For many years there has been a steady takeover of smaller dairy companies by the eight largest national dairy processors. Under pressure from the Federal Trade Commission, one of the regulatory agencies charged with administering anti-trust legislation, acquisitions by these companies have virtually ceased since 1960. However, mergers and acquisitions by medium-sized companies are still frequent. As a result, a growing proportion of milk processed in the smaller milk markets is handled by the largest four milk processors in each market. A special tabulation of profits of fluid milk processors by asset size shows the generally greater profitability of the larger processors.

The determination of wholesale and retail prices of milk has been the subject of considerable controversy. Where State price control exists, it has often led to farm-wholesale margins which are too rigid and too high, encouraging retailer integration into processing in order to retain

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17 However, there has been little trend towards increasing concentration in the largest markets. Cf. Technical Study No. 3, p. 78.
18 Cf. ibid., p. 204. Profits (after tax) are given as per cent of both receipts and net worth. As a percentage of net worth profits increased fairly steadily from -24 per cent (average 1958 to 1961) for firms with assets of $50,000 or less, to 7 per cent for firms with assets of $5 to $10 million and over 9 per cent for firms with assets exceeding $100 million. Firms with assets exceeding $250 million had slightly smaller profits as a percentage of net worth than the $100 to $250 million group. On the other hand, profits as a percentage of receipts were highest for the largest firms.
this built-in margin for themselves.\textsuperscript{19} In a recent survey of the fluid milk industry, John R. Moore suggests that joint profit maximization, i.e., the setting of prices near the level which would be established by a monopolist, is the economic model which seems best to describe price formation in the fluid milk industry. However, Moore regards joint profit maximization as limited to a greater or lesser degree by the number and size of sellers, the threat of entry and various other market characteristics.\textsuperscript{20} On the other hand, the N.C.F.M. Technical Study stresses the intensely competitive struggle among processing firms for retail outlets.\textsuperscript{21} Thirty States have passed laws prohibiting "unfair" dairy trade practices and various forms of non-price competition. These laws have only been "partially successful" in protecting the smaller firms with limited resources and have often increased the significance of larger firms' price advantage by limiting non-price competition! Price wars and "competitive price alignments" have taken place in most markets since World War II. It is argued that "moderate" price wars can have a constructive result by testing innovations and realigning prices to reflect changing marketing conditions.\textsuperscript{22}

In contrast to fluid milk, the market for manufactured dairy products is nationwide. Again, there has been a substantial drop in the number of small manufacturing plants and a corresponding increase in the proportion of total output produced in the largest manufacturing plants.\textsuperscript{23} Coincident with the rise in the average processing volume per plant there has been an increase in output per man-hour of around 85 per cent since 1950 (compared with 60 per cent for all food manufacturing).

Vertical integration by retailers into dairy product manufacturing is less common than for fluid milk processing.\textsuperscript{24} There is some evidence that chain stores are gradually reducing their processing operations in this area—primarily because they can obtain ample supplies of high quality products manufactured on low processing margins.

Finally, in any discussion of U.S. dairy marketing, reference should be made to the importance of producers’ co-operatives. They "handle" about two-thirds of all milk delivered to plants and about two-fifths of

\textsuperscript{19} Integration into processing is also undertaken for other reasons including quality control and economies in distribution. Cf. \textit{ibid.}, p. 99. Retailer integration into fluid milk processing appears to be increasing, but information about the proportion of total milk sales processed by retailers is not available in the reports. Fourteen of the largest 40 chains process fluid milk; in 1963 they processed 53 per cent of the milk they sold. In addition, these fourteen chains sold about 40 per cent of the milk they processed to other stores. \textit{Ibid.}, pp. 96–8.


\textsuperscript{21} Technical Study No. 3, pp. 120–1, 170–4.

\textsuperscript{22} \textit{Ibid.}, pp. 129–32.

\textsuperscript{23} For ice cream see p. 226; for butter, p. 270; and for cheese, p. 339 of \textit{Technical Study No. 3}.

\textsuperscript{24} One exception is ice cream, which is frequently processed or packed by integrated retailers. Hugh L. Cook's observation that, until recently, ice cream was highly profitable to dealers, may explain this difference. Cf. Hugh L. Cook, "The Ice Cream Industry", in Moore and Walsh, \textit{eds.}, \textit{op. cit.}, pp. 123–5.
all farm separated cream. The Commission believes the low profits from dairy manufacturing operations are in part attributable to the dominance of co-operatives and their practice of returning profits to farmers. Some of the larger corporations have withdrawn from the industry in the past and more are expected to do so.

FRUITS AND VEGETABLES

Fruits and vegetables are either marketed fresh or processed into canned, frozen, or dried products. The proportion of both fruit and vegetables consumed fresh has declined, while the consumption of canned and frozen vegetables and fruit (including juices) has risen. This trend may be attributed in part to the greater convenience of these products and in part to the relative decline in the price of processed fruits and vegetables. The point has been reached where it is often cheaper for the consumer to buy processed products than fresh ones. In the marketing of fresh fruit and vegetables the major post-war development has again been the increasing tendency to by-pass terminal auction markets. Several terminal markets have closed and more are expected to do so. Instead, fresh fruit and vegetables are being bought by retailers and others from brokers or handlers at shipping points. There has been a reduction in the number of shipping point plants—especially small single unit plants—in recent years.

These changes have affected price formation; prices are now established in geographically scattered areas where particular products are packed and shipped. Shipping point selling makes price discovery more difficult, especially since large buyers reveal neither the price nor the volume of their purchases. The Commission also believes that these changes have adversely affected the bargaining power of growers.

Attempts by growers to improve their position include the use of co-operatives (which market about one-quarter of all fresh fruit and

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25 Actual figures of physical handling are not available, but a large proportion of these totals would be accounted for by co-operatives acting as bargaining organizations rather than as physical processors. Co-operatives physically distributed about 10 per cent of total nonfarm fluid milk and cream consumption. Technical Study No. 3, p. 177.
26 N.C.F.M. Report, op. cit., p. 46.
27 Technical Study No. 4, pp. 30-1.
28 Shipping point brokers are generally specialized firms whose primary function is to bring buyers and sellers together and facilitate title transfer; they account for about one-third of all fresh fruit and vegetable sales from shipping points. Some brokers operate primarily as agents for producers; others as agents for buyers. The remaining shipping point sales are made by handlers or shippers. A large proportion of these sales are made by grower-shippers. “These shipping point firms are the product of forward integration into marketing by individual producers or backward integration into production by shippers.” Ibid., p. 40.
29 “Shippers feel that their business expansion is not limited by lack of supplies, but rather by lack of sales. Thus when under pressure, shippers make concessions to big buyers such as chain stores, voluntary or co-operative groups and large wholesalers . . . . Growers are in a weak bargaining position when selling their crops to shipping firms. An individual grower has to deal with one of the limited number of shippers in his area—and each of these is likely to be larger than the grower . . . . The grower is in the position of residual claimant in the bargaining process.” N.C.F.M. Report, p. 50.
vegetable supplies) and of marketing orders\textsuperscript{30}. However, the basic reasons for the lack of bargaining power of growers of most individual fruits and vegetables are the ease of entry and the fairly elastic demand for their products. These factors made it unlikely that this situation can be changed fundamentally.

The two major sections of the processing industry are canning and freezing. About 70–75 per cent of the supply requirements of canners and freezers are obtained through prior contractual arrangements with growers. These often specify not only price but also varieties to be planted, acreage, quality, delivery dates, type of harvesting containers, etc. Many processors provide growers with information on production techniques. About 10 per cent of the raw materials used by fruit and vegetable processors is grown on land owned or rented by the processing company.

The Committee comments on the fact that “a few firms control a substantial share of total output of processed fruits and vegetables.”\textsuperscript{31} However, the actual figures for both the canning and freezing industries (with the largest four firms controlling 24 per cent of output and the largest twenty accounting for 50 and 54 per cent respectively) are low and “unconcentrated” by conventional standards\textsuperscript{32}. It is true that if we define industry concentration more narrowly on a product basis, concentration ratios are somewhat higher (with the four largest canners or freezers often accounting for 35 to 50 per cent of total output\textsuperscript{33}). However, as pointed out by Helmberger and Hoos in a recent survey of the vegetable processing industry, these higher concentration ratios have little economic significance\textsuperscript{34}.

\textsuperscript{30} Marketing orders have a wide variety of aims; some control quality; others regulate the rate of flow of supplies to market; others again contain only provisions for co-operative levies for promotion and research. A few marketing orders regulate the quantity marketed. \textit{Technical Study No. 4} contains a detailed description of existing marketing orders and their effects, on pp. 287–357.

\textsuperscript{31} N.C.F.M. Report, p. 51.

\textsuperscript{32} Cf. Joe S. Bain, \textit{Industrial Organization}, (New York: John Wiley, 1959), pp. 124–33. Bain’s classification of oligopolies uses the following criteria: (i) very highly concentrated where the top four firms control 75 per cent or more of output or the top eight 90 per cent or more; (ii) very highly concentrated—65–75 per cent for the top four or 85–90 per cent for the top eight; (iii) moderate concentration—50–65 per cent for the top four or 70–80 per cent for the top eight; (iv) low grade oligopolies where the top four control 35–40 per cent or the top eight 45–70 per cent. Unconcentrated industries fall below type (iv).

\textsuperscript{33} The relevant figures are given in \textit{Technical Study No. 4}, pp. 181 and 222.

\textsuperscript{34} “Considering entry into a very narrowly defined industry such as canned green peas, it must be realized that there exist many canning plants that could can peas with nominal investment in new machinery and equipment . . . Many processing companies have well established organization . . . for dealing with the problems of adding a new product . . . For these reasons it cannot be supposed that established sellers in any one narrow commodity line have significant advantages over the most favoured potential entrants . . . It is on these grounds that we attach little significance to concentration in single commodity lines, even though concentration measured in this way is generally higher . . . In the absence of barriers of entry, the potentially higher level of concentration cannot support significant monopolistic tendencies.” (\textit{Italics} in the original.) Peter G. Helmberger and Sydney Hoos, “The Vegetable Processing Industry”, in J. R. Moore and R. G. Walsh, \textit{eds.}, \textit{op. cit.}, pp. 159–60.
A special study of fruit and vegetable processors’ relationships with buyers revealed some interesting differences in the pricing policy of large and small processors toward private or buyer’s labels\textsuperscript{36}. Compared with goods of identical quality sold under the packer’s own brand, private label products are often sold at a discount (ranging from 2\% to 10 per cent)\textsuperscript{36}. Such price concessions are more often obtained from large rather than small processors. The reason presumably is that the product “image” of small processors is not as well established as that of national processors; hence, small processors are less able to extract premium prices for their own brands.

MILLING AND BAKING

As in Australia, flour milling in the United States is a pretty unprofitable business. Since 1948 more than half the nation’s flour mills have closed, nor is this confined to small, marginal producers. In 1965 General Mills, one of the nation’s largest food processors, closed nine of its seventeen plants. Generally millers are shifting from the manufacture of flour to more profitable convenience products; the speed of this movement is surprising. Thus, three of the largest millers received 80 per cent or more of their sales from flour and mill feed in 1950; by 1965 this had declined to less than a third.

In view of our more haphazard grading techniques for wheat, comments on the effect of new processing technology are interesting. According to the Technical Study, new bakery and cereal products and increasing specialization in food processing have led to more exacting demands for wheats with specific properties; different types of wheat have also become less substitutable for each other\textsuperscript{37}.

A study of the baking industry shows an increasing proportion of total output produced by the largest firms. Most bread is produced by wholesale bakers (i.e., selling mainly to retailers); grocery chain bakers account for about 10 per cent, though this proportion is rising\textsuperscript{38}. Wholesale bakers typically sell under their own label, though here, too, the proportion of private label sales is growing\textsuperscript{39}.

In recent years there has been a significant increase in the number of varieties of bread. Production of 40 varieties by one wholesale baker is not unusual; as a result the economies of scale of production have been

\textsuperscript{35} The term “private label” refers to an arrangement whereby a processor packs his product under the buyer’s label—normally a retail chain or a group wholesaler serving affiliated retailers.

\textsuperscript{36} Technical Study No. 4, pp. 192 and 231.

\textsuperscript{37} Technical Study No. 5, p. 3.

\textsuperscript{38} The four largest chains produce over 60 per cent of the bread and rolls they sell. \textit{Ibid.}, p. 57. The main reasons for integration would appear to be economies of distribution. Distribution costs seem to be very high. Bread which costs 11 cents in the baker’s dock costs 20 cents in the retail store. Private label brands are 10 to 30 per cent cheaper. \textit{Ibid.}, p. 109.

\textsuperscript{39} \textit{Ibid.}, pp. 76–7.
dampered by "the proliferation of bread varieties". Frozen bakery products are a relatively new development; they are growing rapidly and accounted for around 5 per cent of total volume in 1965.

GROCERY MANUFACTURE

The Commission uses the term to cover highly processed packaged "dry" groceries including such categories as baby foods, baking mixes, breakfast cereals, biscuits, packaged desserts, pet foods, frozen dinners, salad dressings, soft drinks, etc. It comments on the high concentration that is found in most areas of grocery manufacture. A small number of large food manufacturers transform basic commodities such as grains and produce into highly processed convenience foods. "For the first time, broad segments of the consuming public have become sufficiently affluent to willingly pay substantially higher sums for both convenience and variety." Coupled with this change in the market, large grocery manufacturers are increasingly concentrating their major efforts on developing and marketing new products. A study submitted to the Commission by a trade association, Grocery Manufacturers of America, Inc., provides some interesting and useful information on the costs and risks of product innovation in this area. The study examines 124 products introduced, including breakfast cereals, cake mixes, margarines, frozen dinners, etc. The costs of introduction average almost $353,000. It is obvious that expenditure of this magnitude is likely to be undertaken only by reasonably large firms, especially since the risks of failure—in spite of marketing research and test marketing—remain fairly great. Thus, about one-fifth of the products were discontinued after test marketing and a further fifth of the remaining products were discontinued after achieving limited or full distribution. Perhaps understandably, information about the profitability of the remaining innovations is less adequate. Within a period of 4 years

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40 Thus the four largest manufacturers accounted for 95 per cent of baby food sales in 1965, more than 90 per cent of soup, 85 per cent of breakfast cereals (1964), 75 per cent of cake mixes, and over 60 per cent for shortening, crackers, and cookies. Cf. N.C.F.M. Report, pp. 63 and 65.

41 Technical Study No. 6, p. 6. This trend has been reinforced by the growing proportion of women working outside the home (22 per cent in 1950; 31 per cent in 1960 and even higher today). Ibid., p. 5.

42 Expenditure on both research and development and on market research has soared. In the last ten years R & D expenditure by 18 large food processing firms has doubled and market research expenditures have almost trebled. However, R & D expenditure is still low compared to other industries. Cf. Ibid., pp. 22 and 31.


44 This excludes costs of new capital equipment. The costs of introduction are subdivided into costs of research and development (average—almost $70,000), marketing research (average—$25,000), test marketing (average—almost $250,000). However, not every product passed through all three stages. Cf. Technical Study No. 6, p. 33.
73 per cent of the remaining products had “broken even”\(^{45}\). However, it seems likely that, on balance, such innovative activity is highly profitable. In 1964 the 22 large firms supplying data on product innovations had a return on net stockholders’ equity of 13.2 per cent compared with an average of 9.8 per cent for all food industries; also, as pointed out earlier, they are increasing their efforts to market new products.

Coupled with this emphasis on new products, advertising and other sales expenditures have increased both in absolute terms and as a percentage of sales\(^{46}\).

The study submitted by Grocery Manufacturers of America explains part of the competitive behaviour of food processors (and, incidentally, the high level of advertising expenditure) in terms of a “product life cycle”. The “cycle” through which a product is supposed to pass includes four stages: First an introductory stage when sales increase slowly, prices are high and the advertising/sales ratio is high; second, a stage of rapid sales growth when advertising expenditures remain high but the advertising/sales ratio starts to decline because of the rapid growth of sales, prices also start to decline; third, a stage of maturity when quantity sold stabilizes and the advertising/sales ratio declines substantially, prices continue to decline at first (though they stabilize later); and fourth, a stage of decline when quantity sold, price and advertising expenditures all decline\(^{47}\). Buzzell and Nourse, the authors of this study, claim that of the seventeen product categories which they examined, “only five showed any kind of disagreement with the hypothesized patterns of trends.”\(^{48}\)

How useful is this concept to explain the behaviour of prices and advertising expenditures? The information on product life cycles for individual products in Technical Report No. 6 is not sufficiently detailed to enable a full assessment to be made. For instance, in three cases the sharp drop in the advertising/sales ratio as “maturity” is reached can be established clearly\(^{49}\). However, in other cases the behaviour of advertising expenditures does not appear to agree with the theory\(^{50}\). But

\(^{42}\) Ibid., pp. 34–9. A product is considered to have “broken even” if gross profit from sales exceeds research and development costs, marketing research, net loss on test marketing and first year marketing expenditures attributable to the product. Some information is also given about cumulative gross profits as a percentage of cumulative sales. However, it is difficult to interpret what this means in terms of more conventional criteria of profitability.

\(^{45}\) For the 10 years ended in 1963, the average annual growth in value of shipments for dry grocery industries was 3.3 per cent, while sales and administration expenses increased by an average of 7.0 per cent per annum. In one industry, cereals, advertising expenses amounted to 15 per cent of total sales by 1964. Ibid., p. 42.

\(^{47}\) Ibid., pp. 48–9.

\(^{48}\) Ibid., p. 49.


\(^{50}\) Thus, evaporated milk, which is regarded as a product in decline because sales per head have been falling, shows little evidence of declining advertising/sales ratios. Ibid., Cf. Figure 5–4, p. 44. Again, the advertising expenditure and sales for salad dressings seem to be difficult to reconcile. Ibid., Figure 5–10, p. 47.

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a full examination of the product life cycle concept is not possible here; it seems likely to be a useful way of looking at some oligopolistic market phenomena, though it may be too imprecise in its present form to lend itself to quantitative testing.

The Commission's general overall study of grocery manufacturing is followed by a detailed study of two industries, breakfast cereals and crackers and cookies (i.e., biscuits in our terminology). Both industries (especially cereal manufacture) are highly concentrated, primarily because of economies of size in distribution and selling; profits in both are above average with returns on investment reaching almost 20 per cent for the four largest cereal manufacturers. Both private labelling and retailer integration into cereals and cracker manufacture are rare; the constant stream of new products, high initial capital expenditures, and the complex technology involved have been deterrents so far.

2.3 FOOD RETAILING

Food retailing has changed markedly in the post-war years. Since World War II the number of food stores has declined by more than a third; the proportion of food sold by specialty stores has declined from a fifth in 1948 to 8 per cent in 1963. Supermarkets—officially defined as stores with an annual turnover of $1$ million dollars—are accounting for an increasing share of the grocery trade. Unaffiliated independents are now responsible for selling less than 10 per cent of all groceries (compared to 30 per cent in 1948); chains and affiliated independents$^{31}$ account for roughly equal proportions of the remainder. There has been an increase in the number of small and medium sized chains, blurring the traditional distinction between giant chains with hundreds of outlets and the old-fashioned small retailer.

Concern over increased concentration in retailing was investigated by the Commission. At the national level there has been very little change in seller concentration since the mid-1950's$^{32}$. At the local level there has been some increase: thus, in 1963 the largest four retailers accounted for an average of 50 per cent of all grocery store sales in the "average" metropolitan area (45 per cent in 1954)$^{33}$. On the other hand, a detailed study of individual retailers' shares in local markets shows that the market shares obtained by individual retailers are subject to considerable

$^{31}$ Chains are officially defined as retailers with more than 10 stores under one overall management. Affiliated independent retailers developed their own integrated wholesale-retailing operations in response to chains. In some cases groups of independent retailers created co-operative wholesale units for their purposes; in others wholesalers assembled voluntary groups of retailers into chain type organizations. Cf. Technical Study No. 7, p. 25.

$^{32}$ Cf. Technical Study No. 7, p. 41. This is partly the result of the relative decline of the largest firm (A & P) which accounted for a significantly smaller share in 1963 than ten years earlier.

$^{33}$ Similar increases were observed in the local shares for the largest eight and twenty local retailers respectively. Cf. N.C.F.M. Report, p. 72.
risks of erosion once they reach 25 per cent of all grocery sales.\textsuperscript{64} The Technical Study also examines the supposition—put forward by Dr W. Mueller of the Federal Trade Commission—that the gross margins which retailers are able to obtain depend on the firm's market share of grocery sales in each local market.\textsuperscript{55} For this analysis N.C.F.M. obtained operating data on more than 6,000 stores operated by the nine largest chains in 1963. Among the tests performed on the data were a series of step-wise multiple regressions—one for each chain—in which gross margins were related to fifteen "independent" variables. The most striking feature of the analysis was that no variable was a persistently good explanatory factor for variations of gross margins as between one local area and another.\textsuperscript{56} On average the fifteen variables explained only 45 per cent of the variation in gross margin. The firm's market share was significant for only one of the nine tests and even there it was less important than four other factors.\textsuperscript{57}

N.C.F.M. results also support the recent findings of Hiroshi Mori and William D. Gorman that market concentration is not an effective variable explaining differences in food retail price levels as between various cities.\textsuperscript{58} They also confirm the validity of Holdren's theoretical argument that oligopoly pricing is unlikely to be a useful theoretical model for explaining food retailers' price policies.\textsuperscript{59}

The Commission discusses not only retailer concentration in selling but also in buying. Because of the growth of affiliated independent retailers who obtain their goods from a single wholesaling organization these two

\textsuperscript{64} Cf. Technical Study No. 7, pp. 54–5. Thus of 21 retailers who had achieved shares of 25 per cent or more in various local markets by 1954, 11 had moved into the 20–25 per cent category (or a lower one) by 1958. Of the 24 firms with shares of 25 per cent or more in 1958, 17 had moved to a lower category by 1963. Some tentative explanations of this phenomenon are given in \textit{ibid.}, p. 57.

\textsuperscript{55} Gross margin is the difference between the cost of merchandise to the retailer and the amount for which the retailer sells the merchandise, expressed as a percentage of the retail price. Mueller's hypothesis was based on data from one chain, the National Tea Company, which supported the thesis. Cf. \textit{ibid.}, pp. 358–69.

\textsuperscript{56} The fifteen variables were (in order of importance): (1) inventory shrinkage, per cent of sales; (2) sales per square foot; (3) sales per store; (4) clerk wage rates; (5) trading stamps; (6) sales per supermarket in market; (7) number of stores in county; (8) distance of store from warehouse; (9) average customer purchase in store; (10) advertising expense, per cent of sales; (11) unionization; (12) labor expense, per cent of sales; (13) market share of firm; (14) age of store; and (15) sales per large chain. Cf. \textit{ibid.}, p. 186.

\textsuperscript{57} Somewhat more success was obtained in explaining variations in net margins—on average, thirteen variables explained 60 per cent of the variation. The thirteen variables were (in order of importance): (1) sales per square foot; (2) sales per store; (3) age of store; (4) inventory shrinkage, per cent of sales; (5) clerk wage rates; (6) unionization; (7) market share of firm; (8) average customer purchase in store; (9) trading stamps; (10) distance of store from warehouse; (11) number of stores in county; (12) size of city; and (13) average family income of customers. Cf. \textit{ibid.}, pp. 186–8.


measures are not synonymous. It is pointed out that buyer concentration is rising; thus, the top 40 chains and the 30 largest voluntary and co-operative groups now account for 51 per cent of all grocery store sales, compared with 32 per cent in 1948. It is difficult to regard this level of “concentration” as economically significant, i.e., for those products where national, as opposed to local, markets are relevant. Even if 70 buyers account for half of all purchases, any single seller must have literally dozens of potential alternative outlets.

Bargaining relations between processors and retailers are also affected by retailer integration into processing and by the growth of private labelling by or on behalf of retailers. Both these developments would appear to improve the distributive system by weakening any monopoly powers of processors. That retailer integration into processing is often undertaken with the aim of sharing in excess profits (i.e., above normal, competitive levels) is suggested by a comparison of the amount of retailer integration into the various processing industries and the four or eight firm concentration ratios in the same processing industries. The highly significant positive relation (at the 0.1 per cent level) suggests (a) that concentration ratios can be a useful proxy for the relative profitability of the different food processing industries and (b) that one reason why retailers engage in processing is to share in the above normal profits of some concentrated industries. This is not to deny that there are other factors influencing retailers to undertake their own processing. Prominent among these are the economies in distribution which retailers are able to obtain (e.g., for baking products and fluid milk), greater control over quality, and attempts to avoid paying premium prices for nationally advertised goods.

The desire to counter the brand image built up by national processors and obtain goods more cheaply led to the growth in merchandise marketed under the special “private label” of the retailer. Private label merchandise is often bought from processors under contract rather than being manufactured by retailers. The N.C.F.M. conducted a special study of private label products, examining its extent, profitability, and consumers’ attitudes to the various types of labels.

Although private label sales have grown in the post-war period, for most retailers they still account for less than 25 per cent of all sales of branded food and grocery products. They are used most extensively

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60 Since some purchases are made by institutional buyers and not all foods sold by affiliated retailers are bought centrally, the degree of “concentration” is somewhat overstated.


62 An important sine qua non is that the retailer must be able to dispose of a sufficient volume of product to operate an efficient minimum sized plant. This is why it has been found, as a general rule, that the bigger the chain the larger the amount of integration. Cf. ibid., pp. 76–7.

63 Technical Study No. 10, p. 15.
by retail chains; for some products including frozen vegetables and fruit juices, bakery products, and dairy products they accounted for about half the volume sold by retail chains. Other products where private labelling is important are canned fruit and vegetables, coffee, and bacon. In order of importance the major reasons given by retailers for carrying private label products were to develop consumer loyalty to their stores, competition from other retailers, and greater profitability.

The average gross margin obtained for a group of 13 private label items was 24.8 per cent—somewhat more than the average gross margin of nationally advertised goods for the same items (22.4 per cent). As a result, retailers allotted relatively more shelf space to private labelled goods, so that, on average, the dollar gross margin per unit of shelf space was equal for both private label and advertised goods. Private labelled goods were almost always cheaper than advertised goods; on the average they were about 17 per cent cheaper.

The most important single factor affecting the profitability of a retail store is the sales volume a retailer can generate. What methods are open to retailers to build sales volume? While price remains "an exciting, if not all important lure to consumers" and "prices specials" are an important form of competition, the Commission believes that price competition has become less important since the mid-1950's. This is partly because the chains' cost advantage—which caused them to stress price—has been largely eroded by now.

Among the various forms of non-price competition, trading stamps are probably the most important. A more recent form of non-price

64 Cf. ibid., p. 57.
65 However, dollar sales per facing equalled $1.67 for private labels compared with $1.73 for advertised goods. A "facing" is the amount of retail shelf space required for the display of one unit of an item.
66 This equality held only for all items; merchandising practices varied widely between products and retailers. Cf. ibid., p. 75.
67 No analysis was made of possible quality differences. Normally, retailers' top lines of private label products are intended to be of quality equal to or better than that of national brands. Most private label purchases are made on strict quality specifications. However, some secondary private label products are bought with the specific aim of providing low-quality, low-priced merchandise.
68 See footnote 67 above.
69 Cf. N.C.F.M. Report, p. 76, and later references to price differences between different types of retailers.
70 Trading stamps are given to customers in proportion to their purchases at checkout points. Customers accumulate stamps and present them to the stamp company for redemption against merchandise. The nominal value of the stamps is normally 2½ per cent of the retail value of the merchandise bought. The actual value of the goods exchanged for stamps is usually below their nominal value. Customers can choose the goods they get for their stamps at redemption stores or from catalogues published by the stamp companies. The popularity of trading stamps has grown tremendously since 1950 when total trading stamps purchased amounted to $30 million, compared with $817 million in 1963. The estimated proportion of supermarkets giving trading stamps increased from 13 per cent in 1954 to a peak of 78 per cent in 1962; since then there has been a slight decline. A full discussion of the characteristics of trading stamps and their economic consequences is given in Technical Study No. 7, Ch. 21, pp. 437-73.
competition is the supermarket game. The early adoption of new forms of non-price competition can be remarkably effective in building store volume. In at least one case the evidence suggests that an attempt to meet non-price competition “head on with price reductions” was too costly even for one of the largest chains. In addition, retailers compete by offering more services, greater product variety, air conditioning, etc.

However, the increasing expenditure on trading stamps, games, and other attention getting devices has produced an economic opening for “food discounters”—food stores stressing price competition and operating on low margins. Food discounters have grown rapidly since 1960; in 1965 they accounted for over 10 per cent of the grocery store business.

According to a detailed study of retailers’ prices and margins in Portland, Maine, and Topeka, Kansas, food discounters had the lowest retail prices, lowest gross margins, advertising and promotion expenditure, and highest utilization of store capacity of any of the five types of retailers examined. A study of unpublished Bureau of Labor Statistics price data for different types of retailers suggests that the retail price advantage of chain over non-chain supermarkets was slightly less than 1 per cent, whilst independents of less than supermarket size charged about 3 per cent more than national chains. This represents a significant drop from the 6 to 10 per cent price differential between national chains and smaller independents before World War II. The primary advantage of national chains consists of their ability to keep delivered costs down. On the other hand, they lose some of this advantage through inflexibility in local situations and higher in-store costs.

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51 One of the most popular of these is called “Let’s go the races”. Supermarkets offer each customer a card with five numbers on it. Customers are invited to watch a TV show (sponsored by the supermarket) of five horse or greyhound races. If the winning horse carries the number on the card for that particular race, the customer can win a cash prize ranging from $2 to $1,000. Needless to say, the odds must be “controlled” (i.e., rigged) to prevent the stores from going bankrupt!

52 The case concerned the attempt in the mid-fifties of Safeway, the nation’s second largest food chain, to combat the introduction of trading stamps by means of price competition. The company was successfully prosecuted under various types of anti-trust legislation for seeking to wipe out opposition. However, what concerns us here is not the illegality of the action (or the wisdom of the legislation) but the relative ineffectiveness of price competition against a new type of promotional device such as trading stamps. According to a statement by Safeway stores before the N.C.R.M. in May 1965, “Safeway’s cost structure would not support meeting all competitive challenge head on with price reductions”. At the time, Safeway’s return on net worth dropped to about half the average level of its competitors. In the five years following a change of policy and management (in late 1955) it returned to the normal industry average. Cf. Technical Study No. 7, p. 213.

53 Since 1950 the number of items handled in the average U.S. supermarket has increased by about 80 per cent.

54 The five were national and local chains, affiliated and unaffiliated independents, and food discounters. Compared to local chains, food discounters’ retail prices were about 4 per cent lower, their gross margin about 25 per cent lower, their advertising and promotion expenses less than half, sales per sq ft about 30 per cent above that of local chains. Cf. Technical Study No. 7, pp. 328-34.

55 Cf. ibid., Chapter 16. Among the different product groups, the chains’ greatest price advantage was found in dry groceries, canned and frozen fruit and vegetable products. These are the areas where the chains’ advantages from integrated processing and private labelling could be expected to be greatest.
Profits after taxes, both as a percentage of net worth and of sales, are highest for the largest retailers. However, even for the largest food retailers (with assets of $50 million or more), net income after taxes averaged only 10.7 per cent on net worth and 1.2 per cent of sales for the 5 years 1957 to 1961. In 1964 the 50 largest food retailers obtained a net return after tax of 11.2 per cent on net worth; the majority of the Committee considered this an “excellent rate of return” for a low-risk field, the large food retailers almost never losing money. They go on to point out that profits were a small component of sales price (1.3 per cent after taxes), though they considered it good in relation to stockholders’ equity.

Finally, the National Commission on Food Marketing investigated the assertion that food retailers charge higher prices in low income areas. The general conclusion was that there were no significant differences in prices charged in the same type of stores in low as compared to high income areas. However, food prices are higher in the small independent stores which are more common in low income areas. Thus, “the problems of the poor are compounded by the fact that they comprise a high-cost market. Families in low income areas have gained least from modern food distribution . . .”

2.4 The Commission’s Recommendations

We can now return to the three questions asked by the Commission in its assessment of the performance of the food marketing system—namely, are the functions performed necessary? Are they efficiently performed? and, lastly, are the profits earned reasonable?

At this point the Commission divided into a majority and a minority. The majority admitted that most functions were efficiently performed “if realistic standards are used as criteria”. While profits in “some branches” of the food industry were higher than necessary to obtain capital, it pointed out that wiping out any excess profit would have reduced the retail price of all food by somewhat less than 1 per cent. The two main criticisms of the majority were:

(a) that selling expenses were too high and could be reduced “in principle . . . without impairing the value of final products to consumers”;

(b) the “high” concentration found in some segments of the food industry (defined as a four-firm concentration ratio exceeding 50 per cent) and “growing concentration” in much of it.

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76 For the period 1957 to 1961 net profits after taxes as a percentage of net worth and sales respectively were: 5.3 per cent and 0.4 per cent for food retailers with assets of $1 million or less; 7.0 per cent and 0.7 per cent for the asset group $1 million to $10 million; 9.4 per cent and 1.2 per cent for the asset group $10 million to $50 million; and 10.7 per cent and 1.2 per cent for the asset group over $50 million. Cf. ibid., pp. 284–5.


78 Ibid., p. 81. The most detailed discussion of the results of this study are given in Technical Study No. 10, pp. 122–44.

79 N.C.F.M. Report, p. 100.
To cope with—or at least minimize—the first problem, the majority favoured the development of more consumer grades by government, more attention to "truth-in-packaging" regulations and the establishment of a consumer agency in the Federal government.

To counteract concentration the majority proposed that the largest firms in any already concentrated industry be prohibited from acquiring any further firms in that industry, that some form of pre-merger notification be made compulsory and, lastly, that conglomerate firms (i.e., those operating in many different fields) be required to publish separate financial statements for each field of operations.

To improve farmers' bargaining power, the majority recommended a wider use of farmers' co-operatives and of Federal marketing orders. They also suggested that Federal marketing orders be strengthened to allow for (i) price negotiations with buyers and (ii) production controls.

The minority—whilst not agreeing completely among themselves—believed that by and large the food marketing system should be given a clean bill of health, that it was technically progressive, intensely competitive, and that the majority was too preoccupied with bigness and concentration. In short, the situation did not require the measures recommended by the majority.

No attempt will be made here to comment on the various majority proposals. Many of the proposals could be justified on other grounds, even if one disagreed with the majority's criticisms; hence, a discussion of their pros and cons would lead us too far afield. However, a further examination of their two major criticisms of the food marketing system seems worthwhile.

2.5 Advertising and Product Differentiation

The growth of advertising expenditures of both manufacturers and retailers of food has been impressive. Between 1950 and 1964 total advertising expenditures by all corporations marketing food had more than trebled, with food retailers' advertising expenditures growing particularly fast. Economists have found difficulty in explaining differences in advertising expenditures—both as between industries and over time. Part of the increase in expenditures can be accounted for by the substantial rise in advertising costs. Those who stress the information supplied by advertisements can point to the need to inform consumers of the many new products available. Presumably it is impossible to estimate what proportion of advertising is "information providing" and what proportion is not. But what is the main purpose of advertising; "that odd mixture of information, suggestion and persuasion, of truth, half truth and no truth"? Surely its primary function is to

80 Cf. Technical Study No. 6, p. 155.
persuade—when this can best be done with true information, true information will be supplied, but when it can best be done with half truths or non-truths these will also be supplied—perhaps just as readily.

There can be little doubt that advertising has been used to enable firms to escape the pressure of price competition; to increase their returns above the levels which would prevail in non-differentiated areas of "commodity" competition. But it is also true that these opportunities are subject to considerable limitations. Food manufacturers' attempts to carve out areas of profitable product differentiation have led to the growth of countervailing power by large retailers. The growth of retailers' food manufacturing activities in highly concentrated fields has limited the ability of many manufacturers to obtain extra-competitive returns. Again private labelling has discouraged manufacturers from attempting to build up allegiance to national brands. Consider the following comparison of the fruit and vegetable canning industry and the freezing industry.

Most large canners began operating before buyer labelling became a common marketing practice and many of these have invested large sums to gain an entrenched position in the market. The development of extensive fruit and vegetable freezing operations took place during a period of growth in buyer label emphasis and acceptance. Few large specialized freezing firms engage in national advertising and promotion programmes.

Again the attempts of food retailers to escape price competition by means of various promotional techniques have led to the growth of food discounters—stores stressing price competition. Whilst trading stamps and supermarket games are not "necessary" functions of the food marketing system, can one really complain about their presence if rival stores are available where this type of expenditure is held to a minimum? It is true that this is not a perfectly competitive market in which one can relax comfortably in the knowledge that a group of eager beavers is at work ensuring price uniformity. But this type of perfect market has never existed in food retailing. If anything, the evidence suggests that pockets of local monopolistic power have declined with the growth of motor car ownership, shopping centres and supermarkets.

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81 What proportion of the time it is profitable to lie is an intriguing question; the answer will obviously depend on the risks of being found out. According to Technical Study No. 7, p. 174, footnote 8, about one so-called "price special" in every seven which were advertised by the major food chains turned out not to be a price reduction at all. Perhaps further experiments in this field could start from this magic ratio!

82 On the other hand, the staff of the Federal Trade Commission argues that retailer integration has not seriously undermined the position of the largest food manufacturers. Its chief impact "appears to have been a weakening of smaller manufacturers relative to larger ones". Cf. Technical Study No. 8, p. 57. One remedy would be to allow further growth of large retailers so as to augment their countervailing power. While this remedy is not likely to commend itself to the Federal Trade Commission, it may provide a more effective discipline of the largest food manufacturers than any other alternative which is politically acceptable and administratively possible.

83 Technical Study No. 4, p. 230.

84 According to a study by one large retail chain, 88 per cent of their customers came from within four city blocks in 1948; now the radius encompassing the same proportion has grown to 4 miles.

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The most important ground for complaint appears to me to be the attempted deceptions of consumers—by means of price specials which are not specials, free lottery or race tickets with an extremely low likelihood of payoff and various other techniques designed to disguise the true deal the consumer obtains. This is "caveat emptor" with a vengeance. However, even if deceptions and dishonesties of this kind are eliminated, this will not lead to a purely competitive market selling undifferentiated products; non-price competition will always remain an important facet of food marketing.

2.6 Concentration and Market Power

In this area "facts" are less easy to come by and their economic significance is particularly difficult to establish. The conventional measures in this area, i.e., concentration ratios for the top 4, 8 or 20 firms provide a misleading level of precision. Primarily this is because they depend on the particular definition of "industry" which needs to be used before concentration ratios can be calculated. Economic definitions of industries are partly arbitrary, even when they are based on complete knowledge of the demand elasticities for the different products of each firm and of the barriers to entry\(^8\). More importantly, the existence of a higher concentration ratio among sellers than among buyers is by no means sufficient evidence that sellers possess superior market power. At least five examples are listed in the Technical Studies where buyer concentration is less than seller concentration, but where the weight of bargaining advantage favours the purchaser. Four of these concern the relative bargaining power between meatpackers, broiler processors, fluid milk handlers, and bakers on the one hand and retailers on the other. The fifth concerns the relative bargaining strengths of flour millers and wholesale bakers\(^8\).

Against this one can cite some evidence showing that concentration ratios are related to market power and profitability. There is the evidence cited earlier of the relation between retailer integration and the concentration ratios in those manufacturing industries where retailers have established processing subsidiaries\(^8\). This can be explained most plausibly in terms of retailers' attempting to circumvent the market power of manufacturers in highly concentrated industries. In addition, a study

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\(^8\) Another arbitrary element arises from the number of firms included. Three, six, and twelve firm concentration ratios would not necessarily provide the same comparative answers as to levels of concentration, i.e., over time between different industries. It is doubtful whether the concept of "level of concentration" can be fully expressed by a single numerical measure. The minority discusses some of these objections more fully. Cf. N.C.F.M. Report, pp. 136-7.

\(^8\) Cf. Technical Studies No. 1, pp. 49-55; No. 2, pp. 50-3; No. 3, pp. 120-1; No. 5, pp. 53-5, for comparisons of relative bargaining strengths between processors and retailers; No. 5, p. 45, for comments on flour millers versus wholesale bakers.

\(^8\) See above (page 69).
by the Federal Trade Commission found a substantial positive relation
between food manufacturers’ profits and the four firm concentration ratios
in the industries in which these manufacturers operated.88

Summing up, high concentration ratios appear to be a necessary but not
a sufficient condition for the exercise of market power, i.e., for obtaining
rates of return in excess of those which would be realized in a purely
competitive industry. A basic point in the N.C.F.M. majority position
is that high concentration is not necessary to secure economies of size in
production, that high concentration may not result in poor performance,
but that it does so sometimes. Hence, they argue that policy in this
industry should discourage high concentration in national markets to
assure a competitive environment. However, the evidence on economies
of size—especially in selling and distribution—is not as clear cut as the
majority suggests.

As pointed out by the majority, the extra profits earned by firms in highly
concentrated industries are not a large fraction of the total sales price.
The extent to which firms are able to raise price above marginal cost is
probably still much smaller in most concentrated industries than in those
situations where government intervenes, e.g., by the enforcement of
Federal Milk Marketing Orders. On the other hand, discrepancies
between price and marginal costs are probably regarded as more justifiable
when the beneficiaries are farmers with incomes near or below the
community average than when they benefit large firms controlled by
affluent business executives.

For the food marketing sector as a whole, profits were approximately in
line with average profits in the economy at large. In some industries
where profit rates were well above average—especially in dry grocery
products—product innovation and/or new technologies are an important
explanatory factor. There is evidence to suggest that such excess profits
tend to decline as the new product or technology is taken up by other
firms (e.g., broiler processing, frozen orange juice, supermarket retailing).
An important question is whether such “neutralization of profits”—to
use J. M. Clark’s term—occurs in most situations, and whether it occurs
at a “desirable rate”.

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88 Cf. Technical Study No. 8, pp. 202–9. The study related to 85 of the 100 largest
food processing corporations. As many of these firms operated in more than
one industry, average four-firm concentration ratios for each corporation were
obtained by weighting each corporation’s sales by the average four-firm
concentration ratio for each industry in which the corporation operated. The 21
firms with the lowest average concentration indices (i.e., 30–39 per cent) earned
an average profit, after taxes, of 6.2 per cent on net worth. At the other extreme,
the 17 firms with average concentration ratios of 60 per cent or more obtained
average profits of 15.1 per cent. These differences (and those between other
groups) are highly significant statistically. The data can be described by means
of the following regression equation:

\[ Y = -6.108 + 0.444X - 0.00202X^2 \]

where \( Y \) equals net profits as a percentage of net worth;
and \( X \) equals the average (four-firm) concentration ratio.
The desirable case lies somewhere between too prompt and too slow neutralizing. I will not call it an "optimum", because that term suggests a precision which no actual system could attain. Neutralization needs to take time enough to leave the innovator incentive that is adequate, but not more, and then diffuse the gains as promptly as is consistent with there being ample gains to diffuse.89

It is this question which the National Food Marketing Commission has failed to investigate to any marked extent. But it is probably a very important question to ask. To an economist from Australia—a country with a much more highly concentrated economy—competition in food marketing in the United States appears, in a majority of cases, to be very effective in neutralizing excess profits.