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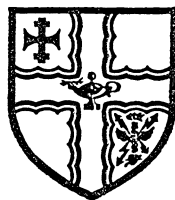
THE BREAD INDUSTRY IN THE UNITED KINGDOM

A Study in Market Structure, Conduct
and Performance Analysis

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PREFACE

This study of the U.K. bread industry relied on interviews with numerous people in the bread industry and food retailing. The author wishes to express his sincere thanks to all those who gave freely and courteously of their time, and provided views and information used in the preparation of this study. He also wishes to record his thanks to the Registrar of Restrictive Trading Agreements for making available the verbatim transcripts of the case of the Federation of Wholesale and Multiple Bakers, held in the Restrictive Practices Court in November 1959. He is indebted to Mr. T.K.Warley of the Department of Agricultural Economics, University of Nottingham for his guidance in conducting this study.

The study is based on a dissertation submitted to the University of Nottingham in partial fulfilment of the requirements for the degree of Master of Science. It is published jointly by the Department of Agricultural Economics of the University of Nottingham and the Department of Social Sciences and Economics of the University of Technology, Loughborough where the author is now a Lecturer in Economics.

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CHAPTER 1

THE THEORY OF MARKET STRUCTURE

CONDUCT AND PERFORMANCE

1. The Concept of "Workable Competition" :

Consumer expenditure on food in the United Kingdom in 1968 amounted to £5,711 million at current prices, about one quarter of all consumer expenditure. This is the sum spent on food produced from farms at home and abroad, plus the value of the fishing catch, together with the marketing expenses incurred in the processing and distribution of raw farm produce from farm gate or ports to households. It is thought that these marketing expenses at present comprise about one half of consumer food expenditure. The growth in the size of the marketing bill in recent years has been due both to rising prices of factors of production employed, especially labour, and the increased provision of services, as expressed in convenience foods.

The economic performance of the food marketing industries, and also those supplying requisites to farmers has, however, hardly been studied in a systematic and continuing manner in the United Kingdom. The size, significance and functioning of the agribusiness sector, in general terms, remains a poorly documented field of study. Detailed analysis has been conspicuously absent to support or rebut either general hypotheses or to answer particular allegations concerning the market conduct or market performance of these industries.

Lepper pointed out in 1959 that processing and marketing probably accounts for between 40 per cent and 50 per cent of the total value of food sales in this country and that there are over two million people engaged in processing and distributing food and drink. She raised a pertinent point in saying

"Presumably a question that occurs to agricultural economists is whether all these people are strictly necessary and whether the job is being done as efficiently as possible. But much less independent research has been done in this field since the war than into the economics of agricultural production." (1)

More recently McClelland has noted only "incidental references to distribution" within the current literature of agricultural economics. (2)

Yet the importance of the agribusiness sector in the United Kingdom cannot be questioned. W.J.Thomas has shown that the ancillary industries employ more labour than agriculture itself. (3).

-
- (1) LEPPER, I., "Economic Structure of the Food Trades in the United Kingdom". Jour. of Agric. Econ., Vol. 13, No. 3. June 1959, p.295.
 - (2) MCCLELLAND, W.G., "The Role of the Supermarket in the Distribution of Agricultural Products." Jour. of Agric. Econ., Vol. 15. No.2. December 1962, p.232.
 - (3) THOMAS, W.J., "The Changing Structure of Agriculture's Labour Force". Report of the Proceedings of the 12th International Conference of Agricultural Economists, 1964, Oxford, London, p.298.

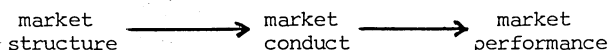
Labour employed in the requisites industries alone has been estimated to amount to nearly one half that engaged in farm production. If the primary distribution of these products is included as well, the ancillary industries clearly form a major sector of employment.

It would seem that in the United Kingdom the importance of the ancillary industries, relative to agriculture, is greater than in most other countries, (4) and is yet a neglected field of study by agricultural economists. It is known that there is a high degree of concentration of production in most agricultural requisite and food processing industries. Such issues, for example, as the extent of product differentiation and the height of barriers to entry are, however, unexplored fields of study. Nevertheless these are significant factors determining the market conduct and performance of industries.

The industries supplying agricultural inputs and processing and marketing agricultural products, in common with the great majority of industries in the United Kingdom, operate in a market economy. Their business activity is co-ordinated primarily by the competitive price mechanism which allocates available supplies, allocates resources between alternative end uses and distributes incomes. Individual firms undertake enterprise activity with a view to private gain. The end results, or performance, to which their behaviour leads are of importance both to society as a whole and to farmers in particular. Society has a strong interest in the performance of industries supplying one of the basic needs of life and which thus significantly influences the overall welfare of the general population. Farmers are concerned firstly, because the on-cost of food marketing services influences directly the level of demand for their products and, secondly, because their ability to discover and satisfy consumers' demands is dependent on the pricing efficiency of the marketing system. They also fear that disparities in market power between themselves as sellers and those who buy from them influences the distribution of incomes within the production-marketing system.

The central propositions of neo-classical economic theory suggest that the organisation or structure of an industry of competing enterprises has a strong conditioning influence on the level of output, prices of products and returns to factors of production. The spectrum of market structures from atomistically organised industries through oligopoly to single firm monopoly has provided models of the behaviour and performance of firms in such market situations.

The theoretical model underlying market structure analysis is similarly both deterministic and sequential in character. The direction of causation is usually assumed to run from structure through conduct to performance, viz



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- (4) DEWHURST, J.F., COPPOCK, J.O. and YATES, L., Europe's Needs and Resources, London, 1961.
DOVRING, F., "Labour Used for Agricultural Production", Agric.Econs. Res. Rep. No.62, Univ. of Illinois, Urbana, April 1963.

Atomistically organised industries do not exist in the real world and the notion of perfect competition is a theoretical abstraction. The set of market structure and conduct attributes which define perfect competition, and which in theory produce ideal performance, in practice have hence been recognised as constituting individually and collectively neither a normative ideal nor a satisfactory basis for appraising actual market conditions. Industries which approach the conditions required for perfect competition characteristically do not give good market performance, and agriculture is the classic example.

The characteristics of atomistically organised industries which have been encountered in practice and which give rise to poor market performance have been summarised by Sosnick. (5) He points out that an atomistically organised market structure would be undesirable if its principal transactions were with a highly concentrated industry which could practice price discrimination. The existence of large economies of scale might warrant a few large firms capable of obtaining lowest attainable costs per unit output by supplying a major part of the market. A more concentrated market structure too might well result in greater total research expenditure than by many small firms. The homogeneity of product characteristic of atomistic competition is not favoured by consumers. Under certain conditions atomistic market structure can lead to chronically depressed earnings to firms and to factors engaged in an industry. Agriculture is the most striking case, but small scale retailing another, where there is usually easy entry into the industry but very slow exit of firms when overcapacity emerges. The slow outmovement of labour thus causes social and economic distress, particularly in localised areas.

These problems give rise to the recognition that the perfectly competitive structure and conduct model is unattainable in any real market and that even the closest possible approximation would entail actual performance of dubious desirability.

By contrast, although industries characterised by a high degree of concentration may in theory lead to restricted output, excess monopoly profits, tardy innovation and exploited returns to factors of production, in practice they may be noted for low profits and prices and a high degree of technological progressiveness. Schumpeter, for example, has strongly argued that market power is a necessary condition of the innovation on which material progress largely depends. Without market power - in the absence of devices to protect investment in innovation - firms might hesitate to shoulder the risks of discovering and exploiting new technology. (6) Richardson has shown that the working of the equilibrium situation associated with atomistic competition has not been satisfactorily explained. (7) Investment opportunities are difficult to identify in perfectly competitive conditions when predictability is zero. It is possible however for firms to undertake informed production planning only when competition is less than perfect.

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- (5) SOSNICK, S., "A Critique of Concepts of Workable Competition." Quar. Jour. of Econ., Vol. 72, No.3, August 1958, pp. 383-4
 - (6) SCHUMPETER, J.A., Capitalism, Socialism and Democracy. Harper and Row, 3rd Edtn., New York, (1950).
 - (7) RICHARDSON, G.B. "The Theory of Restrictive Trade Practices", Oxf. Econ. Papers, Vol. 17 no.3. November 1965, pp. 432-49, and "Price Notification Schemes", OXF. Econ. Papers, Vol. 19 no.3. November 1967. pp. 359-69.

The intermediate market situation of oligopoly likewise provides an infinite variety of performance results. Thus as Fletcher puts it,

"The generally accepted theory of behaviour of oligopolistic firms does not permit us to conclude that competition necessarily will be absent from the industry, but only that it will be different." (8).

Neo-classical theory is thus inconclusive since industries characterised by large firms are not necessarily desirable, but neither do they necessarily lead to poor market performance.

The concept of "workable competition" developed originally by J.M.Clark (9) and explored in the context of industries ancillary to agriculture by Nicholls, (10) attempts to set out explicit standards for structural conduct and performance attributes of a market for workable market performance. The attempt is, in the works of Sosnick, whose contribution to the theory has been of paramount importance, to

"indicate what practically attainable states of affairs are socially desirable in individual capitalistic markets." (11).

Numerous writers (12) have contributed to the evolution and formulation of certain normative standards for the appraisal of all market situations. These normative standards

"set forth the practically attainable conditions whose presence is both necessary and sufficient in a particular segment of the economy for it to be doing or being what the public interest may reasonably demand of it, and whose greater fulfilment would imply greater social benefit." (13)

The criteria of workable competition as yet do not provide a basis for objective appraisal of markets. The problem in formulating such criteria is one basically of conflicting values which have yet to be fully resolved. The perfectly competitive model conformed to the values of freedom, a desire for equity and the dispersion of economic power, and it determined

(8) FLETCHER, L., "Market Structures and Market Power", Chap. 5 in Farmers in the Market Economy, Iowa State Univ. Press. Ames, (1964) p.85.

(9) CLARK, J.M., "Toward a Concept of Workable Competition", Amer. Econ. Rev. Vol. XXX June 1940, pp. 241-5.

(10) NICHOLLS, W.H. Imperfect Competition Within the Agricultural Industries Iowa State Univ. Press. Ames. (1941).

(11) SOSNICK, S., op. cit, p.380.

(12) For example MASON, E.S., "The Current Status of the Monopoly Problem in the United States", Harvard Law Review Vol. LX11, 1949, pp.1265-85
and MARKHAM, J.W., "An Alternative Approach to the Concept of Workable Competition", Amer.Econ.Rev., Vol. XL, June 1950, pp.349-61.

(13) SOSNICK, S., op. cit, p.380.

See Sosnick's latest contribution "Toward A Concrete Concept of Effective Competition" Amer. Jour. Agric. Econ. Vol. L. no. 4. Nov.1968 pp.827-853.

the level and distribution of income with the minimum of inconsistency or conflict. The present dimensions of market structure, conduct and performance are still trying to account for the many aspects of performance, in evaluating how well an industry meets the welfare goals of society. The theory of workable competition thus lacks the theoretical elegance of the perfectly competitive model, and its normative appraisal is much less precise. But while acknowledging that its elements are difficult to quantify and are frequently amenable only to subjective evaluation, and that, in consequence its predictive power is low, "poor" market performance can nonetheless be recognised and be remedied by public policy in a pragmatic, non-doctrinaire manner.

A. The dimensions of market structure :

The various characteristics of a market have different normative significance and this has been emphasised by grouping them into three categories, structure, conduct and performance.

Bain has defined market structure as :

"The organisational characteristics of a market which determine the relations of sellers in the market to each other, of buyers in the market to each other, and of sellers to the buyers, and of sellers established in the market to other actual or potential suppliers of goods, including potential new firms which might enter the market. In other words, market structure for practical purposes means those characteristics of the organisation of a market which seems to influence strategically the nature of competition and pricing within the market." (14)

These broad, strategic aspects of structure are thus according to Bain:

- (a) The degree of seller concentration, defined by the number and size distribution of sellers in the market.
- (b) The degree of buyer concentration, defined in similar fashion.
- (c) The degree of product differentiation, that is, the extent to which sellers' output is viewed as non-identical by buyers.
- (d) The condition of entry (and exit) to the market, which is the relative ease or difficulty with which new sellers may enter the market as determined by the advantages of established sellers over potential entrants. (15)

These dimensions of market structure have been generally accepted, but even within the broad framework of significant features of the market setting there could be included the nature of market information between sellers and the characteristics of the demand for the product.

(14) BAIN, J.S., Industrial Organisation, John Wiley and Sons Inc., New York, 1959, p.7.

(15) BAIN, J.S., loc. cit, p.8.

The degree of vertical integration and nature of public policy towards an industry can likewise be subsumed within this framework as important organisational characteristics of any market structure.

In principle there is no major problem in identifying and quantifying these dimensions.

B. The dimensions of market conducts :

Market conduct has been defined by Bain as
"the patterns of behaviour which enterprises follow in adapting or adjusting to the markets in which they buy or sell." (16).

Bain has specified the significant dimensions as including

- (a) The principles and methods employed by the firms in an industry in determining prices and output. For example with respect to objectives, this refers to whether firms aim for maximised group profits, maximised individual profits or for a "fair" profit margin.
- (b) The product policy of the firm or group of firms. This refers to the character and orientation of product variation and design.
- (c) The sales promotion policy of the firm or group of firms. This denotes the use of advertising as a competitive weapon.
- (d) The means of co-ordination and cross-adaption of price, product and sales-promotion policies of competing sellers. This concerns, for example, whether there is collusion in arriving at common prices, market areas, or sales promotion expenditure or whether a form of price leadership exists.
- (e) The presence and extent of predatory or exclusionary tactics directed against either established rivals or potential entrants. (17)

These main aspects of market conduct as defined by Bain have also been accorded general approval. Firm diversification may be added to the list and identification of this process and the former characteristics are fairly readily determined by factual enquiry.

C. The dimensions of market performance :

Bain has defined market performance as

"the composite of end results in the dimensions of price, output, production cost, selling cost, product design and so forth which enterprises arrive at in any market as the consequence of pursuing whatever lines of conduct they espouse." (18).

Clodius and Mueller regard market performance as

"the economic results flowing from the industry as an aggregate of firms". (19).

(16) BAIN, J.S., loc. cit., p.9.

(17) BAIN, J.S., loc. cit., pp.10-11.

(18) BAIN, J.S., ibid, p.11.

(19) CLODIUS, R.L. and MUELLER, W.F., "Market Structure Analysis as an Orientation for Research in Agricultural Economics", Jour. of Farm Econ., Vol. XLIII, August 1961, p.515.

Sosnick has provided a more comprehensive definition. He views performance as

"the attributes of production and exchange that directly influence the welfare of the participants and society." (20)

The main dimensions of market performance defined by Bain are

- (a) The size of profits, given by the height of price relative to average costs or production.
- (b) The relative efficiency of production, so far as this is influenced by the (actual) size of plants and firms, relative to the most efficient, and by the extent, if any, of excess capacity.
- (c) The size of sales promotion costs relative to the costs of production.
- (d) The character of the product including design, level of quality and variety of product within any market.
- (e) The rate of progressiveness of the firm and industry in developing both products and techniques of production, relative to evidently attainable rates and relative to the costs of progress." (21).

These attributes of market performance listed by Bain are in almost every case vaguely defined and capable of varying interpretation. It is not clear whether profits are defined in aggregate or per unit terms, or expressed as a return on capital. It is more usual to relate promotional expenditure to firms total revenue. In part these deficiencies arise from the "positivist" nature of Bain's terminology rather than as a "normative" basis of market appraisal.

Sosnick has put forward an alternative and more comprehensive list of performance attributes and attempted to define norms for evaluation of observed market performance.

- (a) Production Efficiency. The norm is that greater efficiency is desirable, and is measured by how closely firms in the industry approximate to the lowest attainable real costs for the outputs they produce and distribute.
- (b) Technological Progressiveness. The standard of evaluation concerns how progressive is the industry in question relative to its opportunities, how well it exploits the opportunities for invention and innovation.
- (c) Product Suitability. The norm is that firms should elevate quality so long as the resulting addition to buyer satisfaction outweighs the resulting addition in cost.

(20) SOSNICK, S., "Operational Criteria for Evaluating Market Performance", Chap. 6 in Market Structure Research, P.Farris (Ed.) Iowa State University Press, Ames (1964) p.85.

(21) BAIN, J.S., loc. cit., p.12.

- (d) Profit Rates. The level of profit should be appropriate in relation to risks, the rewards necessary to stimulate innovation and characteristics of the market in question. Moderate losses, when accompanied by excess capacity, are desirable for adjustment of supply to demand, that is are therapeutic in their effects. Immoderate losses or profits are however undesirable.
- (e) Level of Output. Output should not be deliberately restricted so as to elevate prices, ensure unjustifiable profits and raise level of expenditure of consumers.
- (f) Exchange Efficiency. Price formation should not be unreasonably costly. The signals of the price mechanism should be interpreted such that the ratio of actual to potential gains from trade is maximised.
- (g) Cost of Sales Promotion. Sosnick believes that persuasive advertising is socially wasteful and is undesirable.
- (h) Unethical Practices should not occur.
- (i) Participant Rationality. Market participants should have a reasonable opportunity to be well informed so as to act rationally. Rational behaviour, however, is very difficult to define.
- (j) Conservation. Conservation requires a choice of technique of exploitation, time pattern of production and time patterns of investments and other costs, which together yield an optimal net social benefit.
- (k) External Effects. Market participants should not impose burdens on others that they could avoid at relatively small cost.
- (l) Labour Relations. There should be good labour relations and no restrictive working practices. (22).

Neither Sosnick's nor Bain's dimensions of market performance explicitly include

- (m) Distribution Efficiency. The costs of distribution should be as low as possible consistent with the provision of economic services required by consumers.

The notion of "workable" performance, or that which does not diverge "too far" from the ideal for each of these dimensions, still in most cases lacks an operational norm for judging actual against optimum performance. In few cases can measurement be made in quantitative terms for comparison with an objective, quantitative norm. Optimum performance itself is often inadequately specified. Thus in evaluation of market performance we are sometimes forced back to an element of what Bain has called "horseback judgment" (23) rather than precise measurement of performance dimensions against an accepted quantitative norm. Problems of normative appraisal are thus anticipated of the market performance of the bread industry. Market performance is the measure of how well the market activity of enterprises contributes to the enhancement of general material welfare. But whether performance is satisfactory is recognised as being indeterminate ex ante from predetermined attributes of market structure and conduct.

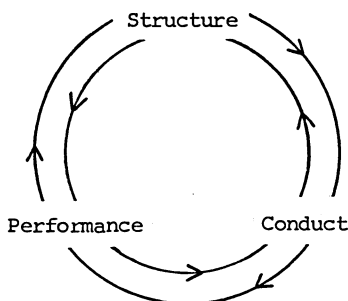
(22) SOSNICK, S., "Operational Criteria for Evaluating Market Performance", pp. 92-125.

(23) BAIN, J.S., op. cit., p.17.

Satisfactory market structure and conduct are thus necessary, but insufficient for workable market performance. Satisfactory performance, conduct and structure are thus necessary and sufficient for "workable competition". As Fletcher has put it

"We are not satisfied if performance is good merely because private holders of power choose to use that power beneficially when they might have chosen to use it otherwise. We want to know not only that performance is satisfactory, but also that such performance is imposed by the competitive pressures in the system. The appropriate test for public policy should not be the quality of business performance but the existence of adequate competition, defined and achieved by structural norms and structural revisions." (24).

Market structure, conduct and performance should thus be understood as a circular relationship rather than a linear one. There is a two-way flow of causative influences, viz:-



Indeed, structural parameters are themselves not independent but interrelated. For instance, the condition of entry may be dependent on the degree of product differentiation. Market structure and conduct overlap because certain events can be viewed as patterns in some contexts and processes in others. Thus product variety can be seen either as the presence of heterogeneity in outputs or as producers' active creation of differently received output - product differentiation.

Similarly, causation operates in both directions between structure and conduct. Thus a structural pattern including high concentration of supply may promote certain patterns of conduct such as price leadership; change in conduct, such as the formation of a cartel, can, however, alter market structure. Structure and conduct together may generate certain performance, say excessive profits, but the profits in turn may attract new entrants thus modifying both concentration and pricing practices.

(24) FLETCHER, L., "Evolving Public Issues in Food Marketing", Jour. of Farm Econ. Vol. 45, No.5. December 1963, p.1266.

11. British Studies of Structure, Conduct and Performance of Industries Related to Agriculture :

Analysis of the industries related to agriculture in the explicit terminology of market structure, conduct and performance theory has been extensive in the United States. The theoretical concepts evolved by Bain and Sosnick within the sphere of industrial economics, have been suggested by Clodius and Mueller (25) as offering a potentially useful framework for the appraisal of farm-related industries. Detailed studies of individual industries have been so numerous that the stage has been reached where cross-sectional analysis of these industries has been possible. Some examples are Market Structure of the Agricultural Industries (26) and the Report of the National Commission on Food Marketing with its Technical Studies of individual industries. (27)

In the United Kingdom, there have been relatively few studies of the industries ancillary to agriculture within the market structure, conduct and performance framework. This is surprising when the farm-related industries fall logically within the preview of the agricultural economics profession. It is the more surprising given the concern of agricultural policy with the level of farm incomes and the fact that the market structure of farm-related industries might be expected on a priori grounds to have an important effect on the welfare of the farming sector.

There have been some notable examples of studies which, in effect, have a market structure, conduct and performance orientation. For instance the reports of the Bosanquet, (28) Runciman (29) and Verdon Smith (30) enquiry committees provide a comprehensive picture of the market structure, competitive behaviour and performance of their respective fields of investigation.

The industries supplying inputs for agriculture, several processing industries and food distribution trades remain, however, largely undocumented. Moreover the depth of study of such industries to date has been inadequate to refute or confirm the frequently made statements alleging the malfunctioning of the market mechanism.

(25) CLODIUS and MUELLER, op. cit.

(26) Market Structure of the Agricultural Industries. J.R.Moore and R.G.Walsh (Eds.), Iowa State Univ. Press, Ames (1966).

(27) "Food : from Farmer to Consumer", Report of the National Commission on Food Marketing, Washington, June 1966.

(28) Report of the Reorganisation Commission for Pigs and Bacon, H.M.S.O., Cmd. 9795, (1956).

(29) Report of the Committee on Horticultural Marketing, H.M.S.O. Cmd. 61, (1957).

(30) Report of the Committee of Enquiry into Fatstock and Carcase Meat Marketing and Distribution, H.M.S.O., Cmd. 2282, (1964).

The situation is as Warley has argued that

"in no other area is the gap between speculative inference and authoritative analysis so wide. We have little idea of the extent to which the inferred dangers of large scale organisations are realised in practice, or about the extent to which they are ameliorated by economies of scale and by innovational progressiveness." (31)

As regards the industries supplying inputs for producers, Kirk has admitted the lack of data to hand by which

"to judge the efficiency, or at all events the physical efficiency, of any of the requisites industries beyond noting such indications as export performance or visible technological advance." (32)

111. The Bread Industry as a Case Study :

This study of the United Kingdom bread industry has been made in the belief that too little is known about the structural conduct and performance attributes of agricultural product markets. There were a number of reasons however for the specific choice for study of the bread industry.

Consumer expenditure on bread at present amounts to £330 million thus forming a large item of consumer food expenditure.

There have been important structural changes in the past decade and a half, notably the forward integration by the two large milling firms into baking.

The Restrictive Practices Court in 1959 and the Prices and Incomes Board in 1965 came to different conclusions as to the role of price competition in the industry.

There have been indications of poor market performance in respect of the dimensions of profit rates and distribution efficiency.

A more general interest derives from the oligopolistic structure of the industry, and hence its potential suitability for empirical examination of market conduct and market performance in the light of the indeterminate solutions provided by economic theory for oligopoly market structures.

(31) WARLEY, T.K., "The Future Role of Marketing Organisations", Jour. of Agric. Econ., Vol. 15, no.4., December 1963, p.550.

(32) KIRK, J.H., "Agriculture's Related Industries", Chap. 7 in Economic Change and Agriculture, J. ASHTON and S. RODGERS (Eds.), Oliver and Boyd, London, (1967).

CHAPTER 2

MARKET STRUCTURE OF THE

BREAD INDUSTRY

1. Historical Development to 1939 :

Bread has been a part of man's diet for some 8,000 years, but its commercial production has been undertaken only in the comparatively recent past. In the South of England, people living in towns appeared to be obtaining bread from bakers "from quite early times. The trade was already organised in London in the eleventh century." (1) However, most of the bread eaten in this country as recently as the beginning of the nineteenth century, was made in the home or baked in communal ovens. As late as 1804 there were no commercial bakers in Manchester which then had a population of one hundred thousand. (2)

As the staple diet of the majority of the population until the late nineteenth century, bread quality and sale were very much the concern of the Crown and government. From the Assize of Bread in 1266, which fixed the weight and price of bread and the bakers' profit, there is a long list of changes of the regulations governing the weight and sale of bread. Current political interest in the price of bread thus has long historical antecedents.

The prevalence of domestic bread making was inevitable in a predominantly rural populace. It was not until the increasing urbanisation of the population in the eighteenth and nineteenth centuries established conditions favourable to the growth of the baking industry, that the importance of home baked bread began its steady decline. The inadequacies of the transport system - poor roads and horsedrawn carts - meant that the nascent baking industry necessarily comprised small units. In 1850 practically all the bakers in the towns - some 50,000 (3) - were independent master bakers who prepared, baked and sold their bread on the same premises, undertaking practically all operations by hand.

Changes in the methods of production and patterns of retailing transformed the nature of the baking trade radically in the next century.

The first International Exhibition of Flour Mill Machinery in London in 1881 can be said to mark the beginning of mechanical baking in the United Kingdom. Changes in the techniques of production in the form of mechanical aids for the preparation, mixing and baking of bread since that time have made possible the development of large scale factory baking. Wholesale bakeries, as the large firms were called, began to appear from the turn of the century at the time of the invention of the travelling oven. Apart from

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- (1) DRUMMOND, J.C. and WILBRAHAM, A., The Englishman's Food. A History of Five Centuries of English Diet, (2nd Edtn.), Jonathon Cape, London, 1957, p.41.
 - (2) BURNETT, J., "Trends in Bread Consumption", Chap. V in Our Changing Fare : Two Hundred Years of British Food Habits, MacGibbon and Kee, London, 1966, p. 65.
 - (3) BURNETT, J., op. cit., p. 66.

supplies on contracts to schools, hospitals and other institutions, much of the bread of these plant bakers was sold through grocers, dairymen and general shops. Some large plant bakery firms owned a number of cafes, teashops and restaurants and baked bread for consumption in these outlets. This was the origin of the baking interest of J. Lyons and Company, Limited.⁽⁴⁾ Others made considerable use of direct sales to the public, and still more relied on their own retail shops. These latter can be called multiple shop bread firms.

There was a consistent rate of increase in the number of shops owned by bakers and in the number of new firms coming into the trade. The growth of multiple shop bread firms in the period up to 1950 is shown in Table 1. The significance of this development of a large number of baking firms with a chain of owned retail shops lay in the potential created for mergers to lead to the growth in importance of a few firms. Indeed the acquisition of a number of these firms formed the basis of the rapid growth of Allied Bakeries Limited before 1939. Furthermore, the growth of the baking interests of the two largest milling firms after 1953 relied on the acquisition of existing bread firms. However, before 1939 the multiple shop bread firms tended to be local and regional in character and few had more than 50 shops.

TABLE 1. NUMBER OF MULTIPLE SHOP BREAD FIRMS AND
BRANCHES OF FIRMS WITH 10 OR MORE
BRANCHES. 1900-50

Year	Number of Firms	Number of Branches
1900	11	265
1910	25	782
1920	40	1,237
1930	82	1,820
1939	79	2,390
1950	69	2,659

SOURCE : JEFFREYS, J., "The Bread and Flour Confectionery Trade", Chapter VII in Retail Trading in Britain 1850-1950. Nat. Instit. Econ. and Soc. Res., Econ. and Soc. Studies No.13, Cambridge Univ. Press, 1954, p.214.

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- (4) A description of the origin and growth of J. Lyons is contained in the Chairman's Statement for year ended 31st March, 1960, Reported in The Economist, 18th June, 1960, p.1280.

It is appropriate at this point to make reference to the structure of the flour milling industry. Although there were in 1935 over 2,600 establishments in flour milling, three firms accounted for 39 per cent of flour output. (5) The predominance of these firms was the result of their extensive absorption of other firms at a time of considerable excess flour milling capacity. These three organisations, Spillers Limited, Ranks Limited and the Co-operative Wholesale Society expanded quickly in the years preceding the outbreak of the second world war. Together they were thought to account for two thirds of flour output in 1944. (6) Thus in the prewar period the bargaining power between these millers and bakers was weighted in favour of the former. However the firm which was to weaken the millers' market power in later years, was growing rapidly at this time.

The formation of Allied Bakeries Limited by Garfield Weston in 1935 was of fundamental importance in marking the beginning of the first large private firm with national distribution of bread. This firm acquired a number of regional bakery firms, such that it claimed within two years to be "the largest of its kind in the country with 2,786 employees, 17 modern bakeries, 86 (bread selling) shops and 494 bread delivery routes." (7) The firms that became members of Allied Bakeries nevertheless continued to trade under their own names, and to a large extent continued their previous trading practices. No national network of retail shops supplied centrally had yet come into existence in the trade.

The concentration of bread production was however still low. The 1935 Census of Production recorded 24,000 bakers and confectioners, (8) and Leak and Maizels' analysis of the data showed there were only 40 units with more than 500 employees. (9). The concentration of net output within the three largest units was given as 10 per cent of the total, and of employment as six per cent. Hence it formed one of their categories of Low Concentration.

The increasing importance of large plant bread production, however, was such that can be appreciated from the fact that in 1938 plant bakers accounted for 24-26 per cent of consumers' expenditure on bread then estimated at £66-£68 millions. Master bakers were thought to account for between 53-57 per cent of total expenditure. The co-operative bakeries, i.e. those owned by a retail co-operative society or operated by a federation of retail societies, numbered some 800, and produced 19-21 per cent of total bread bought. (10). There were, in fact in 1938 800 bakeries operated by 600 retail co-operative societies, and 14 federal society bakeries.

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- (5) Census of Production 1935, Vol. 8, Trade A, Grain Milling.
 - (6) EDWARDS, . H.V., "Flourmilling" Chapter in Further Studies in Industrial Organisation, Fogarty, M.P. (Ed.) Methuen, London, 1948, pp.45-6.
 - (7) EVELY, R. and LITTLE, I.M.D., Concentration in British Industry, Nat. Instit. Econ. Soc.Res., Econ. and Soc. Study No.16, Cambridge Univ. Press, 1960, p.257.
 - (8) Census of Production 1935, Vol. 8, Trade B, Bread and Flour Confectionery.
 - (9) LEAK, H and MAIZELS, A., "The Structure of British Industry", Jour. Royal Stat. Soc., Vol. 108, Parts 1,2, 1945, Appendix 111, p.193.
 - (10) JEFFERYS, J., "Bread and Cereals", Chap. Vlll in The Distribution of Consumer Goods, Nat. Instit. Econ. Soc. Res., Econ. Soc. Study No.9, Cambridge Univ, Press, 1950, p.166.

This growth of the plant firms, and particularly multiple shop bread firms in the bakery trade, was made possible by continuing technical advances of production, which reduced costs per unit of output, and the introduction of mechanical wrapping and slicing of bread. The production of wrapped, sliced bread gave an advantage to large scale production units, vis-à-vis, the master baker. But equally important an explanation of the rising importance of large plant firms was the development of motor transport. Given the perishable nature of the product, it made possible the economies of large scale production to be achieved within the wide market area now able to be served. This wider market for plant bakers could, however, involve high distribution costs. The Royal Commission on Food Prices in 1925 considered that the lower production costs of the large scale bakers were offset by the higher distribution costs incurred when delivering from a central point. The Commission therefore stated that the small baker would survive in considerable strength. (11) But in the densely populated urban areas, the costs of distribution for plant bakers did not become prohibitive in relation to turnover, and throughout the interwar years the master bakers were losing ground.

The advance of the plant bakery firms with owned outlets also led to changes in the siting of shops, and the emphasis on different types of goods sold within these outlets. The shops were increasingly sited in main shopping areas and the emphasis was on cake and confectionery rather than bread. The reasons for the growing importance of flour confectionery sales by plant firms owning a chain of shops, lay partly in the rise of consumption per head of flour confectionery as compared with a falling demand for bread in the interior years. The declining consumption of bread is the basic factor accounting for more recent structural changes in the baking industry and is examined in the next section.

11. Demand Characteristics and Trends in Consumption of Bread :

British experience during the last century and a half suggests that consumption of bread varies inversely with the standard of living. This experience is similar to that of the United States and other developed industrial nations where as real incomes rise, the proportion of income spent on starchy foods falls, whilst that spent on protein rich food rises. Thus, whereas in 1841 bread comprised on average one-third of total expenditure on food, in 1881 it had dropped to one-sixth and by 1960 to one-sixteenth. (12) Rising standards of living have led to a movement away from cheap, filling foods towards those with greater palatability such that bread is for most people to-day an adjunct to a meal and not the meal itself.

(11) Royal Commission on Food Prices, First Report Vol. 1, H.M.S.O., Cmd. 2390, 1925, para. 59, p.23.

(12) BURNETT, J., op. cit., p.73.

CHART I

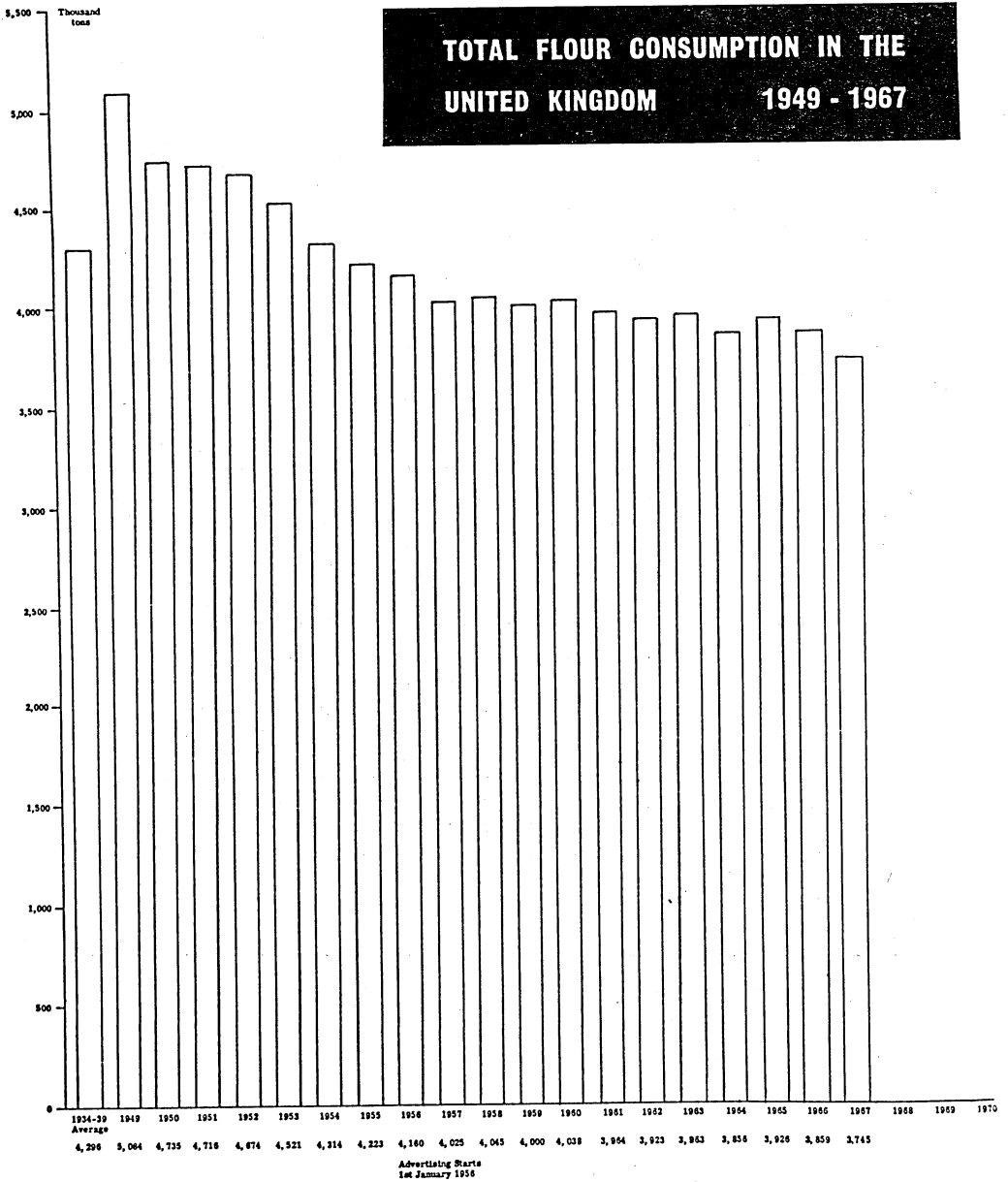
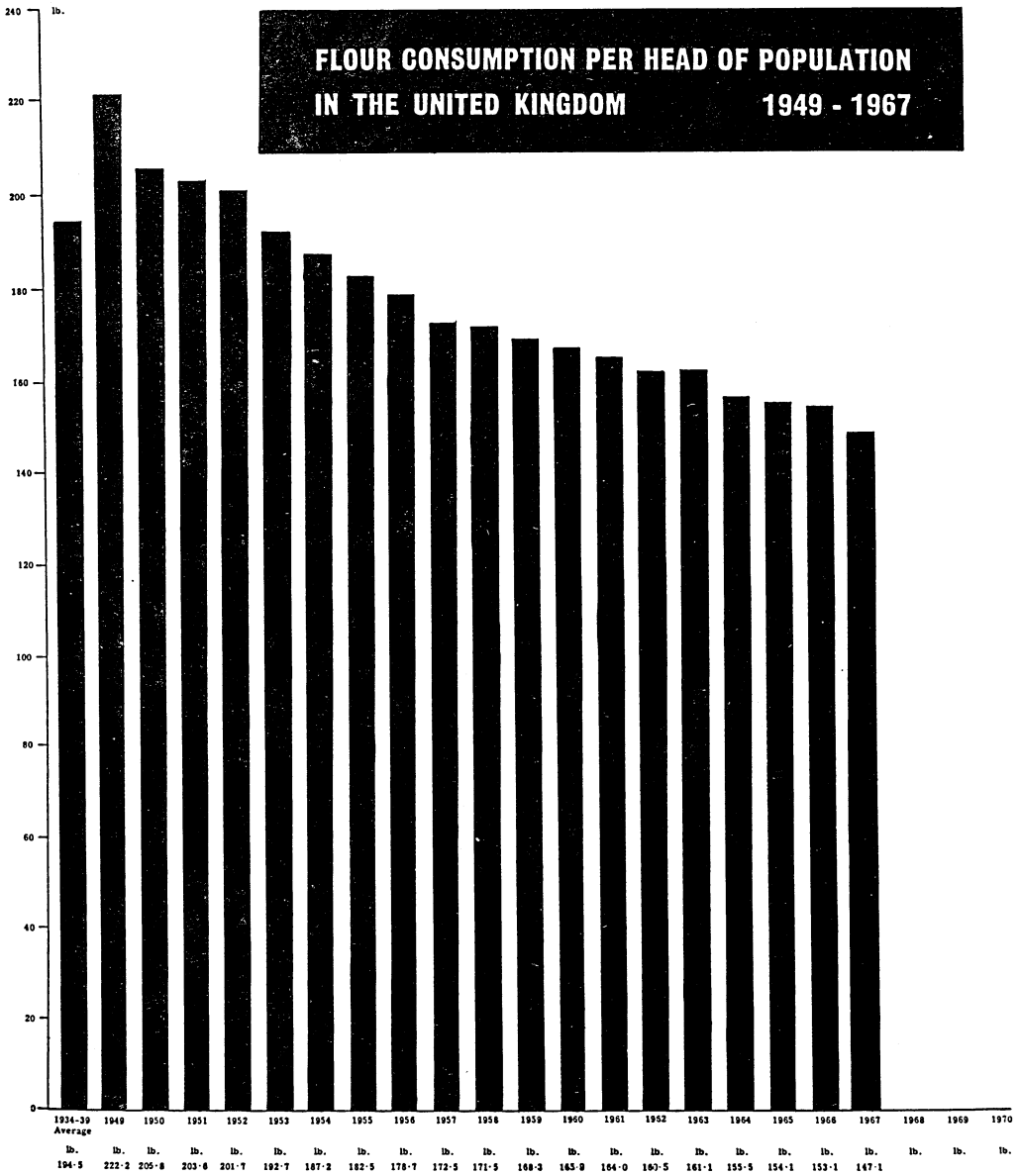


CHART II

**FLOUR CONSUMPTION PER HEAD OF POPULATION
IN THE UNITED KINGDOM 1949 - 1967**



Advertising Starts
1st January 1956

Source: Annual Abstract of Statistics.

These patterns in bread consumption over the past century and a half can be distinguished. The first was of stability during the first half of the nineteenth century, a second of increasing consumption over the period 1840 to 1880, and a third of declining consumption since then, interrupted only by temporary increases during two world wars.(13) The trend in consumption of flour is depicted in Charts 1 and 11 of total flour consumption and flour consumption per head of the period 1949-60, and the downward trend in bread consumption is shown in Table 5 over the past decade.

Income and price elasticities of demand for bread in total have thus for a long period of time been negative. The income elasticity of expenditure for bread as a whole was estimated at -0.05 in 1955 and - 0.20 in 1965.

Price elasticity during the 1950's has been estimated at - 0.20.(14)

This discouraging outlook for bread consumption has serious implications for the competitive behaviour of firms already in the industry, and also for potential entrants. Any existing firm or new entrant that cuts the price of bread cannot by so doing significantly enlarge bread sales in toto : the best it can do is reduce another firm's sales by the amount of its own gains.

This continuing fall in consumption of bread helps to explain the emphasis placed by the bakery firms in the interwar period on cake confectionery. It further lies behind the milling groups forward integration into bread in the early 1950's to ensure outlets for their flour. Furthermore it makes a policy of diversification into other food products, where the trend of demand is more favourable, a compelling and commercially prudent course.

The demand situation in very recent years has continued to be discouraging.

In 1966 average consumption of bread per head per week was estimated at 38.64 ounces. In 1967 it rose to 40.02 ounces. The increase caused Mr. G. Weston, chairman of Associated British Foods, to make optimistic statements about the future of bread consumption at the company's annual meeting. However data as is available for 1968 does not support the view that the fall in bread consumption has halted. In the first quarter of 1968 consumption was 38.5 ounces; in the second it was 38.0 ounces and in the third quarter of 1968 consumption was 38.77 ounces. The latter figure was the lowest ever recorded for that quarter. The estimated level of consumption for the year as a whole is provisionally put at 38.31 ounces. In retrospect the figure for 1966 seems to be unduly low.

(13) BURNETT, J. op. cit., p.70.

(14) CARPENTER, E.M. and PERKINS R.J., "Trends in consumption and marketing" Chap.6 in Economic Change and Agriculture, Ashton, J and Rogers, S.J. (Eds.), Oliver and Boyd, London, 1967, p.117.

TABLE 2.

CONSUMPTION OF TYPES OF BREAD AND ALL BREAD 1956-65

ozs. per head per week.

	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
BROWN Unwrapped	2.38	1.50	1.11	1.07	1.54	1.35	1.38	1.56	1.49	1.60
Wrapped		0.78	0.78	0.65	0.88	1.04	1.06	1.04	1.15	1.24
WHITE LARGE Unwrapped	44.36	15.00	11.64	11.16	9.40	9.37	9.61	9.62	7.55	7.79
Wrapped		21.18	23.15	23.14	22.97	23.09	21.81	22.16	23.66	21.66
WHITE SMALL Unwrapped		3.34	2.52	2.72	2.89	2.49	3.14	3.77	3.23	3.30
Wrapped		1.34	1.12	1.02	1.38	1.15	1.51	1.54	1.58	1.56
WHOLEMEAL/WHOLEWHEAT	1.60	1.44	1.54	1.56	0.92	0.84	0.83	0.63	0.58	0.69
MALT	0.20	0.20	0.24	0.22	0.21	0.22	0.21	0.26	0.28	0.22
OTHER	2.54	3.22	5.11	5.75	5.28	5.62	4.04	2.70	2.44	2.53
TOTAL BREAD	51.08	48.00	47.21	47.29	45.47	45.17	43.57	43.26	41.97	40.60

6 SOURCE : Domestic Food Consumption and Expenditure 1965, H.M.S.O., Appendix B, Table 1, p.114.

The continuous real rise in prices over the past decade has, however, meant that expenditure on bread has risen by over 50 per cent.

TABLE 3 BREAD CONSUMPTION AND EXPENDITURE 1955-66

	Consumption		Expenditure	
	Index		Index	
	('000 tons)		(£m)	
1955	3,964	100	189	100
1960	3,360	85	243	128
1961	3,368	85	259	137
1962	3,281	83	270	143
1963	3,292	83	280	148
1964	3,203	81	289	153
1965	3,120	79	295	156
1966	2,986	75	301	159

SOURCE : Economist Intelligence Unit, Retail Business, Special Report no.2, November 1965, p.26. and Revision Report, November 1967, p.38.

Although the average income elasticity of demand is negative, the level of consumption still varies inversely with the size of income. Consumption per head is half as much again in income Class D1 households as in Class A1 households, as defined in the National Food Survey.

TABLE 4 BREAD CONSUMPTION AND EXPENDITURE OF VARIOUS
INCOME GROUPS - 1966

Income Group	Expenditure per head per week	Consumption per head per week
	(pence)	(ozs.)
A1	20.21	27.96
A2	22.97	32.71
B	25.59	38.26
C	28.28	41.89
D1	30.16	44.39
D2	26.47	37.43
Old Age Pensioners	27.72	38.86
All Households	26.11	38.64

SOURCE : Domestic Food Consumption and Expenditure 1966
H.M.S.O., Part 11, Tables 26,27 p.70,72.

There are, and have been, other factors besides the negative income elasticity of demand for bread, which have explained the downward course of consumption, and will maintain its future downward course. Social, demographic and occupational changes have played their part in contributing to the decline in bread consumption. The physiological factor of reduced physical activity in contemporary times, meals outside the home and the increased use of convenience foods within it, are three such factors of continuing importance. The differences in regional consumption of bread

that exist at present are probably explained by the relative importance of sedentary occupations within those areas. Market research studies (15) have shown that housewives when slimming are aware that bread is a food to avoid. These discouraging factors affecting the demand for bread, seemingly a "casualty of social change" (16) help to explain the structural changes that have taken place in the bread industry since 1945, which are now examined.

111. Increasing Concentration of Production since 1939 :

The concentration of bread production into fewer firms has steadily increased in postwar years. At the present time four large firms together account for about 70 per cent of the bread market. These four are Associated British Foods Limited, Ranks Hovis-McDougall Limited, Spillers Limited and the Co-operative Wholesale Society.

The process of concentration which began prewar was stimulated between 1939 and 1953 by the payment of uniform rates of subsidy. The subsidy was paid to all bakers, irrespective of their individual trading results. The rate of subsidy was based on an average of costs and proceeds of bread firms. In general, master bakers found that this subsidy formula made profitable bread production difficult, and applications for the baking subsidy dropped from 20,646 in 1942 to 15,403 in 1950, to 14,156 in 1953, (17) a fall of approximately 6,500 in ten years. It cannot be assumed, however, that the total number of bakers declined to that extent because some bakers continued to make confectionery, even though they ceased production of the so called "national" loaf.

The structure of the industry in the early nineteen fifties showed a much sharper distinction in size of firms than prewar. There existed a large number of small establishments and a small number of large units. Exact comparison with the 1935 Census of Production is not possible, but the 1951 Census of Production recorded 1,914 establishments with more than 10 employees in the United Kingdom, and 13,224 establishments with less than 10 employees for Great Britain only. (18) Overall concentration was still low in 1951, with the largest three units accounting for 17 per cent of net output and 15 per cent of employment. The number employed in establishments of more than 10 employees increased about 25 per cent (from 105,000 to 132,000) between 1935 and 1951, and the number of such establishments fell marginally from 2,650 to 1,900. The increasing importance of larger establishments is revealed by the fact that the number of small establishments (those with less than 10 persons employed) fell by over 7,000, so that they employed in 1951 just 60,000 about one third of the total numbers employed in the industry, (19).

(15) See study cited by SOFER, C., JANIS, I. and WISHLADE, L. in "Social and Psychological Factors in Changing Food Habits", Chap. VI in Changing Food Habits, McKenzie, J.C. and Yudkin, J. (Eds.), MacGibbon and Kee, London, 1964.

(16) BURNETT, J., op. cit., p.74.

(17) SHEPPARD, R. and NEWTON, E., The Story of Bread, Routledge and Kegan Paul, London, 1957, p.176.

(18) Census of Production 1951, Vol.8, Trade B, Bread and Flour Confectionery.

(19) Census of Production, op. cit.

TABLE 5

NUMBERS OF SMALL AND LARGE ESTABLISHMENTS AND
NUMBERS EMPLOYED IN 1935 AND 1951

	1935	1951	Percentage Change
Numbers of establishments with 11 or more persons	2,650	1,900	- 28
Numbers employed	105,000	132,000	+ 25
Numbers of establishments with 10 or fewer persons	20,900	13,200	- 36
Numbers employed	78,000	60,000	- 23

SOURCE : Census of Production, 1935 and 1951.

Evely and Little's analysis showed the large difference in size within the industry. The difference in employment by the largest three units, compared with all others was the most striking within their study of 220 trades. The average number of plants of the three largest firms was 27.3 as against 1.3 for other firms. (20) The Census does not disclose the identity of the major firms in an industry, but Evely and Little suggested the largest three in the bread industry in 1951 were Allied Bakeries, J. Lyons and the retail co-operatives. (21)

Evely and Little concluded that the growth of Allied Bakeries

"probably accounted for the greater part of the increase in the trade's concentration from 1935 to 1951." (22).

This increasing importance of Allied Bakeries, the new entrant to the industry, was achieved not by the establishment of entirely new productive capacity, but by the acquisition of going concerns, and particularly of multiple shop bakers. By 1954 Allied Bakeries controlled 72 plants and 642 shops in the United Kingdom. (23)

Whilst the concentration of production into fewer firms increased substantially therefore between 1935 and 1951, it took an even more pronounced upward movement following the decontrol of the grain trade in 1953, and the opportunity of bakers to use cheap, imported flour. A disagreement arose between Allied Bakeries and two of the largest millers, Ranks and Spillers. The milling firms refused to give special discounts related to the volume of Allied Bakeries' purchases of flour from them. The latter countered by buying flour from Canada, and later Australia, and blending it with English flour. With other firms also buying the low priced imported flours, the domestic millers found it necessary to close mills and put others on short time working. Though eventually conceding a special discount to Allied Bakeries, both Spillers and Ranks decided to assure themselves of their flour outlets in the future by expanding their hitherto minor baking interests.

(20) EVELY, R. and LITTLE, I.M.D., op. cit., p.85.

(21) EVELY, R. and LITTLE, I.M.D., op. cit., p.257.

(22) EVELY, R. and LITTLE, I.M.D., op. cit., p.259.

(23) BELLAMY, J., The British Markets for Flour and Wheatfeed, Univ. of Hull, 1957, p.13.

The decisions of both firms to integrate into baking were taken reluctantly, since millers traditionally had possessed a strong bargaining power vis-à-vis the numerous, small independent bakery firms and had previously felt no need to control their principal customers.(24) Spillers already owned a few (but large) bakery firms, and although the baking interests of Ranks were more substantial, in neither organisation were their bakery interests of any real size within the bread industry, or of substantial significance to the firms themselves.

Following the dispute, there was vigorous competition for bakeries in 1954 and 1955 between Ranks, Spillers and Allied Bakeries. But, whereas the latter had steadily built up the framework of a national bakery organisation by this time, Ranks and Spillers in the rush for bakeries inevitably bought businesses almost irrespective of their size. This indiscriminate buying was particularly true of Ranks. Large sums were paid for the goodwill of small bakery firms acquired in the sellers' market existing for master bakers willing to surrender their independence. Spillers formed United Bakeries Limited in 1955 to look after its baking interest and Ranks in the same year formed a company to consolidate their acquisitions, British Bakeries Limited.

The significance of these structural changes in baking is only partly revealed in the next two reports of the Census of Production, those for 1954 and 1958.

The Census of 1954 recorded a fall in the number of baking establishments of more than 10 persons from 1,914 in 1951 to 1,681 a fall of 12 per cent, although gross output rose nearly 8 per cent and with over 5 per cent fewer employees. (25) The number of small firms fell from 13,224 in 1951 to 10,768, and their total employment dropped from 59,237 to 46,027.(26).

The Census showed the great importance of flour confectionery to small firms as against bread production, with sales of the latter estimated at £28.5 millions as against £41.5 millions for flour and other confectionery. (27). It thus considerably understates the concentration in production of bread. A further weakness of Census data has been changes in definitions, so reducing comparability between periods.

The definition of small firms as less than 25 persons, rather than 10 persons, in the 1958 Census of Production makes description of the continuing concentration very difficult. There is, however, an estimate of the concentration of sales, net output and employment within the largest flour firm. This showed that with 88 establishments, the four largest organisations accounted for 24.7 per cent of sales and 22.1 per cent of employment. (28).

(24) This is evident from the Annual Reports of the time, viz. Spillers Limited for 1954.

(25) Census of Production 1954, Part 8, Trade B, Bread and Flour Confectionery, Table 2 (i).

(26) Census of Production 1954, op. cit., Table 2 (ii).

(27) Census of Production 1954, op. cit., Table 5 (ii).

(28) Census of Production 1958, Summary, Table 5.

As stated, the inclusion of flour confectionery, particularly important to master bakers, gives a considerable underestimate of the importance of the major firms in bread production. The importance of flour confectionery is shown in Table 6.

TABLE 6 **SALES OF BREAD AND FLOUR CONFECTIONERY OF LARGE AND SMALL BAKERY FIRMS - 1958**

				£'000
	Bread	Flour Confectionery	Other	Total
Firms employing 25 persons or more in connec- tion with bakery	146,899	94,627	2,559	244,087
Firms employing less than 25 persons (estimate based on sample)	8,872	10,786	679	20,336

SOURCE : Census of Production 1958, Part 8, Bread and Flour Confectionery, Tables 4(i) and 4(ii).

Description of the momentum of concentration is made more difficult by the fact that acquisitions were kept secret as long as possible, and it was not until the early nineteen sixties that company statements of the major firms began to reveal the full extent of their bread interests. Bellamy stated in 1957 that Ranks were then believed to control about 40 bakeries and Spillers 20. (29)

Company statements of the mid-nineteen fifties show, however, that the extent of expansion was such that a call on company cash reserves was insufficient to finance such acquisitions. Thus Spillers in 1957 had recourse to external borrowing, in sharp contrast to its previously conservative self-financing policy of relying on undistributed profits for expansion. (30) Allied Bakeries made issues of new capital in 1954, 1955 and 1959 to help finance expansion. (31)

In 1955 the flour firms, Hovis Limited, notable for its production of a speciality bread flour, and McDougalls Trust Limited, which specialised in self raising flour for domestic use, merged to form the fifth largest milling group. In 1962 it amalgamated with the largest milling firm, Ranks, to form a large organisation with flour, bakery, food retailing, agricultural merchant and other interests.

(29) BELLAMY, J., op. cit., pp.14-15.

(30) See Chairman's statement for year ended 31st January, 1957, Reported in The Economist, 22nd June, 1957, p.1113.

(31) See Chairman's statement at Extraordinary General Meeting on 19th February, 1959, Reported in The Economist, 28th February, 1959, p.821.

Integration was not just confined to millers : bakery firms took interest in flour milling concerns. Allied Bakeries Limited which in 1955 had acquired the Aerated Bread Company, one of the multiple shop bakery firms having extensive catering interests, began pursuing a policy of self-sufficiency for its flour requirements. Between 1961 and 1962 it acquired 29 small (32) flour milling concerns, and is the major example of integration backwards into flour-milling which has taken place.

One of the major firms, the Co-operative Wholesale Society, was already an integrated flour milling and baking concern, though the nature of the link between flour and its bread production became more explicit in the late nineteen fifties. Certain retail co-operative societies even before 1939 had found that their trade in bread could not justify an individual bakery and had formed federal bakeries to supply the area of adjacent co-operative societies. Between 1948 and 1953 80 retail societies ceased individual bread production, and in 1954 26 federal bakeries accounted for 20 per cent of co-operative bread production as compared with 5 per cent in 1944. (33) The policy of supplying bread from the Co-operative Wholesale Society rather than individual societies, had behind it the concern of the Wholesale Society for its extensive flour milling interests which were experiencing falling sales on account of the poor results of the bakery trade of individual societies. The policy originally was to take over the bread production and distribution of retail societies experiencing poor results essentially as a rescue operation, but it developed as a consistent policy in acknowledgement of the economies of large scale production which could be achieved through the installation of larger plants. Indeed the Co-operative Wholesale Society expects less than 10 retail societies at the end of the next decade to have their own bakery.

The concentration of production in the hands of the four largest organisations, and more precisely, the three non-co-operative firms, Associated British Foods, Spillers and Ranks Hovis-McDougall, has continued in the nineteen sixties. It has been estimated that there are about 8,000 baking firms in the United Kingdom at the present time, (34) with 6,000 actually making bread. This implies a fall of some 2,000 since 1954. But, while master bakers in particular have gone out of business, numerous others have been taken over by one of the large organisations and thus have not ceased production. Company statements of the largest firms have in more recent years shown their principal baking interests. The Annual report of Ranks Hovis-McDougall for 1965 listed 157 active subsidiaries within the Bakery Activity Division, and there was the same number in 1967.

(32) Financial Times, 17th December, 1962.

(33) Bellamy, J., op. cit., p.15.

(34) Flour Milling and Baking Research Association.

The total number of establishments in England and Wales known to be affected by the Bakery Wages Council at 1st October, 1967 was 8,941.

The report of Associated British Foods, the parent company of the firms, Allied Bakeries, stated in 1960 that the organisation comprised 80 bread and cake bakeries in the United Kingdom. In 1967 there were 76 bakeries within the group. Spillers have not divulged their interests in the company statement of recent years, though it is significant that the sub-title "Flour Millers and Animal Feedingstuffs Manufacturers" was dropped as a description of the activities of the company as early as 1958. It then stated baking was "now an important section of our business". (35)

A more revealing picture of the size of these three large firms is given in the publication "Who Owns Whom". (36) The degree of vertical integration between flour milling and bread manufacture is still understated in "Who Owns Whom", because minority interests in numerous small baking firms by these large organisations are not shown. The number of absolutely independent bakers is small, since many are tied to one of these large firms for at least a proportion of their flour supplies. Financial assistance is readily given to small bread firms experiencing temporary financial difficulties, and the major baking firms, as the price of their help, stipulate that a fixed percentage of supplies of flour should be made from them.

Forward integration too, has not been confined to Spillers and Ranks. There are other examples of flour millers who have taken controlling interests in bakeries to safeguard an outlet for their flour. Some have extensively developed a bakery business to complement their flour interests. A striking example of the latter is the milling firm of Cranfield Brothers Limited of Ipswich, which has recently developed the "Betabake" group of bakeries in Romford, Gillingham and Ipswich. The firm owned some bakeries in the period before the forward integration by Ranks and Spillers. It found the market for its flour decreasing as these firms acquired small bakers and decided to enlarge its own bakery interests.

Similarly backward integration has not been confined to Associated British Foods. J. Lyons & Co. Ltd. has had a 50% stake in Celebrity Holdings which controls J.W. French & Co. Ltd. In June 1969 it was agreed that Lyons would acquire the outstanding 50% of Celebrity Holdings.

For the two major flour milling organisations, Ranks and Spillers, the rapid acquisition of bakeries quickly established a secure outlet for their flour. By 1956 the Chairman of Ranks stated that sufficient units had been absorbed to take "a good proportion" (37) of their flour production. In 1959 the Chairman of Spillers said their baking business "now absorbs a significant part of the company's flour output." (38)

(35) Chairman's statement for year ended 31st January, 1958, Reported in The Economist, 7th June, 1958, p.939.

(36) Who Owns Whom : A Directory of Parent, Subsidiary and Associate Companies, O.W. Roskill and Co., Ltd., London, 1967.

(37) Chairman's statement for year ended 31st August, 1955, Reported in The Statist, 7th January, 1956, p.21.

(38) Chairman's statement for year ended 31st January, 1959, Reported in The Economist, 13th June, 1959, p.1051.

Vertical integration has now proceeded to the point where each of the four largest firms is independent of the others for its flour supplies. Although Associated British Foods still imports a small proportion of its flour requirements, its increased flour milling interests through backward integration has however steadily reduced its dependence on imported flour in recent years.

The bread market is thus vitally important to the flour milling activity of these firms on account of the restricted market for flour outside any one of them.

A. Market shares :

Though the industry has many firms, its market structure, as stated earlier, is one of an important oligopolistic core and a large fringe of small-sized producers. The four largest firms now account for 68 per cent of total bread production. (Table 7)

TABLE 7 MARKET SHARES OF THE MAJOR BREAD FIRMS BY
VOLUME OF SALES - 1969

	Percentages
Ranks Hovis McDougall	25
Associated British Foods	24
Spillers	12
Co-operative Wholesale Society	7
J.Lyons	1½
Others	30½
	100

SOURCE : Trade estimates.

In the United States, the geographical size of the country and the perishability of the bread product have shaped the existence of almost one hundred identifiable bakery markets. These markets, however, overlap to varying degrees. (39) In most of these markets sellers consist of a concentrated core of a few dominant companies surrounded by a fringe of many small firms.

The much smaller physical area of the United Kingdom makes such demarcation of markets much less precise. The major baking firms usually own a bakery in the larger towns and each is thus broadly based throughout the country. However, their dominance in particular areas is less marked than in others. For example Associated British Foods and Ranks Hovis McDougall have the major shares of the market in the London area. The former, however, is less strongly placed in the Midlands. On the other hand Spillers market share in the latter area is somewhat greater than in London.

(39) Distribution : The Challenge of the Sixties, Report to the American Bakers Association, Arthur D. Little Inc., Cambridge Mass, December 1960, p.73.

Master bakers seem to be more numerous in the North West, the London area, and the South East, but within any one geographical area the four largest firms together are still of dominant importance as compared with the market share of all other bakers combined.

J. Lyons is the fifth largest baking firm, being a prominent supplier in London and the home counties, with four plants surrounding the metropolis. (40) It also has a significant market share in the West Country having two plants at Bristol, but the company does not distribute in Wales or the North. Its coverage in East Anglia would be greater had the merger with Cranfield Brothers of Ipswich not fallen through in June 1969. No other bakery firm - other than those already mentioned above - has such a prominent market share, though for historical reasons a number of strong independent bakers are prominent in the aggregate in the Sheffield area.

The perishable nature of bread and the high costs of transportation has meant that increased concentration of production can be achieved only through extensive multi-plant development, such that the geographical concentration of output is low. Thus the coefficient of localisation of production as defined by Florence fell from 0.22 between 1930-35 to 0.11 in 1951 to 0.10 in 1958. (41).

B. The declining importance of master bakers since 1900 :

Whereas in 1935 only 5 per cent of bread was produced in plants, twenty years later the proportion had risen to 37 per cent. (42) This rising importance of plant production has as its corollary the falling numbers of master bakers and of the importance of break-making as a craft industry.

In 1948 Hermann Levy had argued it was not so much consumer's preference for the product of the master baker that had ensured his survival, such as it was, but the forces of family tradition, the granting of credit to regular customers and the lower cost of distribution compared to plant bakers who tended to make door to door sales over a wider area. (43)

However, in the two decades since Levy wrote, the crusty loaf of the master baker has been, in general, less popular with consumers as compared with the convenience of the wrapped, sliced loaf, which is the dominant product of plant bakers. The factors which Levy mentioned have proved insufficiently strong to prevent a considerable fall in the number of master bakers since 1948.

(40) J. Lyons Bakeries around London are at Cadby Hall, Chessington (Surrey) Tottenham, Crawley (Sussex).

(41) See SARGANT FLORENCE, P., Post-war Investment, Location and Size of Plant, Nat. Inst. Econ. Soc. Res. Occasional Papers XIX, Cambridge Univ. Press, 1952, p.3.

(42) BELLAMY, J., op. cit., p.13.

(43) LEVY, H., The Shops of Britain : A Study of Retail Distribution, Kegan Paul, London, 1948.

A fall in the number of master bakers before 1939 was partially prevented by the efforts of local associations of master bakers to prevent flour millers supplying flour to bakers, especially plant bakers, practising price competition for bread.

During the war and until the removal of the baking subsidy in 1956, the operation of the subsidy made it difficult for master bakers to earn a satisfactory profit from breadmaking. The number of bakers claiming the baking subsidy fell consistently over this period as Table 8 shows.

Although plant bakers were able to sell bread at a lower price than master bakers, from 1939 to 1956 there was in fact no price incentive for the public to buy plant bread. Both plant bakers and master bakers sold bread at the maximum retail prices.

There can be no doubt that the operation of the baking subsidy during the period of price control contributed considerably to the advance of plant bakers. The lower unit costs of plants enabled a reasonable profit to be derived, whereas small bakers found it difficult to make anything like a satisfactory profit. The subsidy was assessed so as to provide an average profit of 5s. 0d. per sack of flour. Most master bakers earned only 2s. 0d. per sack whereas plant bakers obtained 8s. 0d. per sack. (44) Whether the plant bakers would have made such an impact had it not been for the subsidy scheme and price control is debatable. It does however, seem unlikely that their development would have been as rapid.

Moreover in the scramble for bakery outlets after 1953, the major plant competitors were prepared to threaten a price war with a well established master baker in order to acquire his business. Such price discrimination by a shop belonging to one of the major firms, to induce the master baker to sell, was a factor also in contributing to a noticeable higher rate of bankruptcy among bread and flour confectioners in postwar years (Table 9). This higher rate of business failure in the years between 1953 and 1957 when the two large milling groups were integrating into bread baking and competing with Allied Bakeries for bakeries, is striking. The National Association of Master Bakers does not disclose its membership, although it is believed to have fallen from around 9,000 in 1945 to about 5,000 at the present time. Many master bakers are however known not to belong to the National Association.

Business failure, however, cannot account for the fall in the number of bakers by 4,000 since 1945. It is clear that many of the small bakery firms have not ceased bread production, but have been absorbed by larger units. Examination of "Who Owns Whom" shows the large number of firms, formerly owned by master bakers, which are now part of Ranks, Associated British Foods or Spillers.

(44) SHEPPARD, R. and NEWTON, E., op. cit., p.176.

TABLE 8 NUMBER OF BAKERS CLAIMING THE
BAKING SUBSIDY IN THE UNITED
KINGDOM 1942-1955

1942	20,646	1949	16,475
1943	19,987	1950	15,403
1944	18,911	1951	14,915
1945	18,254	1952	14,470
1946	17,760	1953	14,156
1947	17,057	1954	13,843
1948	16,682	1955	12,522

SOURCE : SHEPPARD, R. and NEWTON, E., "The Story of Bread", Routledge and Kegan Paul, London, 1957, p.176.

TABLE 9 NUMBER OF BAKERS RECEIVING ORDERS
UNDER THE BANKRUPTCY ACT 1914 IN
PERIOD 1949-67

1949	7	1958	25
1950	10	1959	14
1951	12	1960	17
1952	23	1961	4
1953	29	1962	9
1954	35	1963	19
1955	32	1964	6
1956	35	1965	12
1957	31	1966	12
		1967	19

SOURCE : Annual Report of Board of Trade
"Bankruptcy", H.M.S.O.

One factor predisposing numerous small bakers to sell out to a larger firm, as mentioned earlier, was the attractive terms offered, but often more pressing was the tax position of many independent concerns. The Chairman of Spillers in 1955 in outlining the policy of integrating into the bread industry said,

"this decision was assisted by the fact that a substantial proportion of the baking industry is composed of family businesses, some of whom, by reason of the effect of taxation and in particular of estate duty, are anxious about the continuing of operations in their present form." (45)

By the end of the 1950's, most of the financially weak master bakers had been absorbed by these larger plant organisations. Those remaining have increasingly specialised on fancy bread production where their advantage relative to the plant firms is greatest. The latter have come to regard master bakers who do not belong to one of the major organisations, not as competitors, but firms whose continued bread production is desirable since they are essential outlets for their flour. The impact on master bakers of extensive price competition between the major plant firms would be to cause many small bakers to go out of business. This is one factor, even if a minor one, inducing competition between bread firms to take forms other than open price competition.

Spillers, indeed, have attempted to foster the growth of master bakers by organising their production of bread in federal bakeries. It has seen the federal bakery as a means of ensuring an outlet for its flour and has financially supported such bakeries through its subsidiary, Federal Bakeries Limited. Since 1960, it has sponsored about 12 federal bakeries, but found this form of vertical integration beset with problems. It has not found it easy to obtain cohesion between several previously independent master bakers, in either their inception or actual operation. The problems of the type of loaf to be produced and which baker has the last batch of bread baked, seem to limit much further development of federal bakeries.

Ranks have preferred the alternative of taking a major interest in a few small firms through its Hovis subsidiary, Master Bakeries Limited, and thereby provided a tied outlet for its flour sales.

The Prices and Incomes Board thought

"the absorption of smaller companies by larger seems likely to continue to remain a feature of the industry, even if on a reduced scale." (46)

A good example of the continual takeover of smaller firms is that of Spillers' acquisition of Garners, a privately owned bakery prominent in North West London, in July 1969. Nonetheless a further large fall in the numbers of master bakers seems unlikely since many are now financially quite strong. The President of the National Association of Master Bakers thus seems justified in refuting

(45) Chairman's statement for year ended 31st January, 1955, Reported in The Economist, 18th June, 1955, p. 1087.

(46) National Prices and Incomes Board Report No.3, Prices of Bread and Flour, H.M.S.O., Cmnd. 2760, September 1965, Para. 12, p.3.

"the suggestion that the days of the small, independent baker are numbered".

He has recognised that

"with the changing pattern of (food consumption) habits, there must be readjustment in their numbers",

but believes

"that decline to be now halted and that the future will prove that the small independent baker and the multiple baker can exist side by side each supplying the demands of the public". (47)

1V. Buyer Concentration :

The degree of buyer concentration denotes the number and size distribution of the buyers of the output of a given industry and is a significant dimension of market structure since theory postulates (and actual experiences verifies) that the character of the relationships between sellers in an industry and buyers of their products will, in part, determine that industry's market conduct and performance.

In many markets goods and services are sold directly to consumers, who are numerous, and who buy both in small units and a small proportion of total output. This atomistic structure of buyer concentration was true of bread until the early years of the present century when master bakers sold bread direct to customers in their shops or through retail delivery.

The feature of the plant bread firms was the introduction of an intermediary in the form of a retailer, to whom bread was sold for consequent re-sale to consumers. Not all plant bakers depended on such intermediaries. Some indeed, depended on their own shops as the major outlet for their bread. Nonetheless, the growth of plant bread production has been paralleled by the increasing importance of grocery and other food retail shops to perform a retailing function for bread. In 1938 between 22 per cent and 26 per cent of plant produced bread passed from plant baker to consumers through non-owned retail shops. (48) By 1965 this proportion had reached about 60 per cent. (49).

In the prewar period many of these retailers were grocers with a comparatively small bread turnover, (usually less than 5 per cent of their total turnover). The influence on price and conditions of sale by such retailers was minimal. In postwar years the rising importance of large food chains has, however, reduced this disparity in bargaining power between bakery firms and retailers.

At the national level, the degree of concentration in food retailing is still lower than that of food manufacturing. However, at the regional level, the degree of retail concentration is significantly higher than at national level.

(47) WILSON, E., President of the National Association of Master Bakers, Speech at Manchester Bakers' and Confectioners' Exhibition, Bakers Review, 24th November, 1967, p.2210.

(48) JEFFERYS, J., The Distribution of Consumer Goods, p.167

(49) National Prices and Incomes Board, Report no.3, Para. 13, p.3. "Prices of Bread and Flour".

Thus, in London and the South East, multiples and large co-operative societies account for over a quarter of the total food retailing establishments, (50) which, given the essentially regional market for bread, enhances the bargaining strength of retail chains vis-à-vis the bread manufacturing firms.

Supermarket stores are important to many of the food chains. All supermarkets, and over 80 per cent of self-service stores stock bread, and the practice of buying bread in grocers and large food shops by the housewife is increasing. (51) Supermarkets have as yet less than 30 per cent of the market for bread. (52) The major baking firms are thus facing the growth in importance of large food chains, and the increasing tendency towards bilateral oligopoly which that development entails. The question whether any supermarket group will consider integrating into baking is examined later in this chapter.

The most detailed analysis of the retail distribution of bread is given in the 1961 Census of Distribution. The Census recorded 148,230 shops selling bread and flour confectionery, of which approximately three-quarters, (114,831) were grocery and provision dealers. Specialist bakery outlets accounted for most of the remainder. The relative importance in terms of bread sales of co-operatives, multiples and independents is summarised in Table 10.

The importance of outlets owned by the major baking firms is difficult to establish within the total of specialist bread and flour confectionery retailers. This is because the Census tabulates by the nature and size of retail outlets, and not their ownership. The total number of such specialist retail shops fell from 24,181 in 1950 to 17,644 in 1957 and to 17,549 in 1961. This reflects, in part, the diminishing numbers of master bakers who possessed one or more shops. There is support for this conclusion from the breakdown of these totals. In the period between 1951 and 1957, and between 1957 and 1961, the numbers of specialist bread and flour confectionery shops of co-operatives fell consistently. The same was true of non-co-operative retail organisations with less than 10 branches. The number of retail establishments of multiple retailers (with more than 10 branches), however, increased over the period of eleven years by 68 per cent. The turnover of such firms rose even faster - by 250 per cent.

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- (50) Economist Intelligence Unit, Retail Business No.115, September 1967, "Concentration in the Retail Grocery Industry", p.13.
- (51) Economist Intelligence Unit, Retail Business No.118, December 1967, "Specialist Food Shops", p.6.
- (52) Quaker Oats Limited, Self-Study Programme in Retail Food Store Operations, Book no.11, The Bakery Department, 1967, p.19.

TABLE 10 BREAD AND FLOUR CONFECTIONERY OUTLETS AND TURNOVER-1961

	Number of outlets	Percentage	Turnover £m	Percentage
Co-operatives	14,310	9.6	54.8	14.5
Multiples (5 or more branches)	26,317	17.8	138.9	35.5
Independents	107,603	72.6	198.0	50.0
TOTAL	148,230	100.0	391.7	100.0

SOURCE : Census of Distribution, 1961, Part 1, Establishment Table 9
and part 14, Organisation Table 8.

TABLE 11 SPECIALIST BREAD AND CONFECTIONERY SHOPS IN 1950, 1957
AND 1961

	1950		1957		1961	
	No.	£m.	No.	£m.	No.	£m.
Co-operatives	1,509	28,751	1,361	43,037	1,147	38,500
Non co-operatives 1-9 branches	19,887	121,677	13,271	131,032	11,705	123,062
Non co-operatives 10 or more branches	2,785	28,048	3,012	41,820	4,697	72,663
TOTAL	24,181	178,476	17,644	215,889	17,549	234,224

SOURCE : Census of Distribution, 1961 Part 1, Establishment Table 3.

The sample Census of Distribution of 1963 indicates a marginal increase in the number of specialist bread and confectionery shops overall - 17,849. No breakdown of this total is yet available. Board of Trade Journal 23-2-68 p.585.

It is a reasonable presumption that most of these large establishments are owned by the major bread manufacturing firms which have expanded the number of outlets under their own control in recent years. This is not to suggest that the large plant firms have poor coverage in the independently owned specialist bread and flour confectionery shops. Indeed many master bakers sell the national branded bread of the large firms alongside their own speciality loaves.

The 1961 Census of Distribution showed the relative importance of the grocery trade in turnover of bread and flour confectionery. It recorded that grocers accounted for 41 per cent of total turnover in bread and flour confectionery, specialist bread and flour confectioners for an equal amount, and a large part of the remainder was retailed by co-operative societies. (53) Unfortunately, the inclusion of flour confectionery in the analysis gives a misleading picture of the relative importance of particular types of outlets for bread. For example, the importance of home delivered bread is not separately identified.

TABLE 12

THE DISTRIBUTION OF BREAD BY TYPE OF
OUTLET OF THE MAJOR FIRMS IN
RELATION TO TURNOVER

	Percentage
Retail rounds	20
Owned outlets	17
Non-owned outlets	60
Contract trade	3
	100

SOURCE : Trade Estimates and National Prices and Income Board, "Prices of Bread and Flour", Report No.3. September 1965, p.3.

According to data submitted to the Prices and Incomes Board by the industry, approximately one fifth of bread is sold by home delivery to consumers. A market research study prepared for the three large non-co-operative groups before the study of the Board was begun suggested as much as one third of bread was home delivered. (54) Table 12 shows the relative importance of the distribution channels of the major baking firms, accepting the figure of 20 per cent of turnover for direct sales to consumer.

The proportion of business conducted through each channel varies considerably between the major organisations. Whereas J.Lyons and Company have no retail rounds, the Co-operative Wholesale Society and the retail co-operative societies sell more than half their bread by home deliveries, with the remainder sold through 12,000 co-operative shops. Associated British Foods sells bread through its 3,000 tied outlets. Sales to non-owned outlets are more important to Spillers, which has only 300 tied shops and 80 per cent of its trade is with non-owned retailed outlets. Ranks Hovis McDougall own well over a thousand shops but the trade with non-owned outlets is still a very important part of the turnover. (55)

(53) Census of Distribution, 1961, Organisation Tables, Table 9.

(54) Market Investigations Limited, "Attitudes to Bread Quantifying Study", December 1965.

(55) Economist Intelligence Unit, Retail Business No.117, November 1967, "Bread", p.41-2.

V. Product Differentiation :

The degree of product differentiation denotes the extent to which buyers have specific preferences among the competing products of the various sellers established in an industry. The degree of imperfection of substitution between the various products of the industry as considered by buyers, is held to be an important influence on the character of the competitive relationships between established sellers. They are not necessarily bound to sell at a single price and there is to the individual seller some independent jurisdiction on price.

The strength of buyer preferences is determined by reference to cross-elasticity of demand, which is defined as the responsiveness of the sales volume of one product to a small change in the price of a second. Although we define an industry as a group of firms producing close substitutes in the eyes of buyers, product differentiation refers to the less than infinite cross-elasticity between products within that industry. The imperfection of substitution between such outputs is due to the fact that buyers, for various reasons, prefer the product of one seller to that of others in the industry.

Product differentiation within an industry is generally based on the opportunity for producing significantly different designs of the goods in question and the relative ignorance of buyers with respect to the merits of various alternative products. It also arises from the susceptibility of buyers to persuasive appeals concerning the alleged superiority of products of individual sellers. These preferences are developed by advertising, through the use of brand names, trademarks and company names.

Since bread is a consumer good, the possibility of producing a differently designed product, using a brand name and backing it by extensive advertising, readily suggests itself as feasible market strategy. Nevertheless, the frequency of its purchase and the intrinsic simplicity of the product are factors which would seem to make consumers sufficiently well-informed to prevent extensive product allegiance. Whether this is so is examined later.

Deliberate product differentiation in the bread industry has been of comparatively recent origin, since the use of a brand name is difficult without a wrapper in which to sell the loaf. (56) Wrapped loaves did not appear until the early part of this century and the cost of wrapping (and slicing) gave an inherent advantage to plant bakers whose output could justify the installation of the required equipment. Master bakers continued to produce the craftsmen's product of an unsliced and unwrapped loaf.

The development of wrapping was slowed down by the Second World War, but since then the wrapped, sliced loaf has achieved such popularity with housewives (see Chart 111) that it has become the basis for the differentiation of bread by brand between plant bakers, and more particularly, the major national firms. It is significant that the increased acceptability of wrapped bread, the increased use of brand names, the increasing

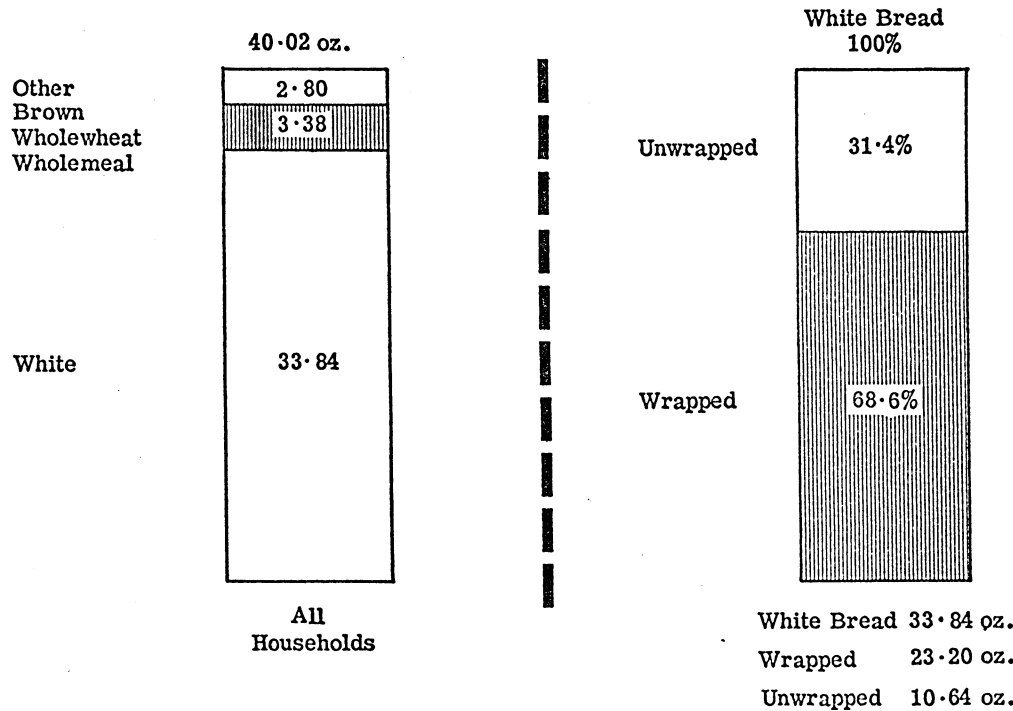
(56) This is not inevitably so, or completely true, for the "Hovis" loaf has long had the "Hovis" name shaped into the loaf. Hovis bread, however, is made from a speciality flour sold by Hovis Limited, and is not the brand name of a bakery firm.

CHART III

CONSUMPTION OF BREAD - WRAPPED VERSUS UNWRAPPED

1967 (Provisional Estimates)

oz. per person per week



Source: National Food Survey 1966

concentration of production and rising levels of advertising expenditure have all been parallel developments in the bread industry since the end of the baking subsidy in September 1956. Bakers were then no longer obliged to bake the so-called "National" loaf, on which they received the subsidy. The removal of the subsidy hence led to an immediate increase in importance of their branded bread. Today branded bread accounts for over two thirds of total sales in England and Wales and over 80 per cent in Scotland.

Whereas the market area of a master baker or even plant baker pre-war was essentially local, or at most regional, the four largest firms have, to varying degrees, almost national distribution on which to derive maximum benefit of consumer familiarity with their brand name. Hence the first national brand was also dependent on the development of nationally based firms. Since the distribution area of any one bakery is limited, this meant that the nationally distributed loaf had to come from multi-plant bakery firms, throughout the country.

The first national brand "Wonderloaf" came in 1953 from Spillers shortly after their integration into bread. This was soon followed by "Sunblest" from Allied Bakeries. At present there are five national brands. The major brand names of the four major national firms are shown below:

<u>Firm</u>	<u>Major Brands</u>
Ranks Hovis-McDougall Limited.	"Mothers Pride"
Co-operative Wholesale Society and Retail co-operatives.	"Wheatsheaf"
Spillers Limited.	"Wonderloaf"
Associated British Foods Limited.	"Sunblest" "Tiger" "Top Taste"

Two fifths of the sales of wrapped 28 oz. sliced loaves are accounted for by the four principal, nationally distributed brands. Most of the remaining 60 per cent is accounted for by local brands of the four larger firms. The relative importance of individual brands is shown in Table 13. The national brands are those promoted by advertising on television, which is the most important medium used.

Nationally advertised brands are not the complete basis of product differentiation in bread. There is differentiation in the retention of names of locally established baking firms taken over by the Spillers, Ranks Hovis-McDougall, and Allied Bakeries organisations since 1953. Hence there is a differentiation of product based on the continuing satisfaction of local buyers' preferences. The nature of the controlling parent organisation is not revealed, and the impression of a continuing independent concern is fostered in this manner by local labels. This basis for product differentiation is of great importance to the bakery organisations because of their distribution system, i.e. a very considerable dependence on retail outlets which are independently owned. Most grocers and food shops take bread from three or more bread suppliers. The apparent independence of local baking firms within a national organisation permits any one organisation to be a multiple-supplier to any one retailer.

TABLE 13

BRAND SHARES OF THE MARKET FOR WRAPPED
SLICED BREAD - 1965

	Percentage
Wonderloaf.	12
Mothers Pride.	11
Wheatsheaf	10
Sunblest	9
Others	58
TOTAL	100

SOURCE : Economist Intelligence Unit, "Retail Business"
No. 93, "Bread", November 1965, p.33

The acquisition of master bakers' shops in the decade since 1953 has also meant that the major firms (other than the co-operatives) may own apparently competing shops in a single street which all belong to the parent company.

The non-co-operative groups further attempt to differentiate their product in other numerous ways. There is usually a minor brand name which is, in fact, exactly the same bread as that of the main brand. A wrapper of contrasting colour, however, suggests that the two types of bread are different in taste.

Bakery firms also paint their vans used for home delivery in a different colour, and use a different name, to those vans which make delivery to grocers and other outlets. The vans making wholesale delivery bear the baking firms name. Both retail and wholesale vans, however, carry the same product.

Product differentiation is further developed through the extensive range of bread products manufactured by the national firms. Associated British Foods produces about 50 different types of bread and the other major organisations similarly produce a wide range of loaves.

This variety of bread includes both the production of fancy bread, e.g. crusty bread, Vienna rolls and different sizes and shapes of loaves baked from the same dough type.

In recent years there has been an increasing tendency to distinguish loaves by their wrappers. The "Tiger" loaf introduced by Associated British Foods in January 1967 has a distinctive wrapper in the form of its colour and twist-wrapped end. An advertising campaign for "Sunblest" bread, launched in November 1967, was based on its new wrapper.(57) Transparent film wrappers with imprinted patterns are also a recent innovation. These "bagged breads" can be expected to increase in importance, if the trend in the United States is taken as a guide. (58).

Despite such widespread attempts at product differentiation it is pertinent to assess how effective consumer preferences have been shaped.

(57) A research enquiry was conducted to test consumer acceptability of the new "Sunblest" wrapper. See The Baker, November 1967, p.23

(58) See The Bakers Review, 20th October, 1967, p.1953.

Bain has suggested that the establishment of brands, and their support by advertising, is not automatically effective in creating strong product differentiation in a consumer good industry. (59) The relatively simple character and function of basic necessities and their repeated purchase by consumers set strong limiting factors on consumers' readiness to believe in the existence of real differences in such goods. These limiting conditions are easily fulfilled for bread. Furthermore there is factual evidence to support the conclusion that product differentiation is, as yet, not strongly developed in the bread market.

Most trade sources hold the view that brand loyalties are weak because standard bread is so manifestly the same product under the brand wrapper. They admit that housewives are aware of the practically indistinguishable differences in taste between the major brands.

A test by the Consumers Association of a panel of 100 people found "many could, quite a lot couldn't" detect a taste difference between similar types of bread, one made by a plant bakery and one made by a small baker. (60). It is reasonable to suppose that such differences are even less easily identified between all plant produced brands of bread.

A trade contract claimed that only one person in ten bought bread by the brand name. The majority of customers simply asked retailers for "a sliced large loaf" or "small uncut loaf" as appropriate. A further source stated that his market research suggested that the major determinants of where bread was bought were characteristics of the shop itself, and not the brand of bread sold. It is significant that the major baking firms derive no premium for their branded bread, as the prices of standard loaves are identical. Indeed, when there has been a price differential between the major brands, sales of the higher priced bread have fallen sharply. This means that the cross-elasticity of demand between various brands of bread are high, and consumers readily purchase the lower priced product.

There have been in fact two examples in recent years of significant changes in the patterns of trade following the inception of a price differential between the major brands. One is the sales experience of Ranks Hovis-McDougall which increased its prices by one penny two weeks before the rest of the industry in January 1966. Sales fell dramatically in the period before the other firms adjusted their price upward and it took a long time - in one area two years - to regain the previous market share.

The other test of the strength of brand loyalties is provided by the price cutting campaign of a group of North East retail co-operatives in January 1967. The threefold increase in sales achieved by a price cut of 4d. on a standard "Wheatsheaf" loaf further throws doubt on the strength of brand loyalties. The disparity in price in this particular instance was, however, considerable. Nevertheless, in the first case cited, turnover was highly sensitive to a price differential of just 1d.

(59) BAIN, J., Barriers to New Competition, Harvard Univ. Press, Cambridge Mass., 1965, p.130.

(60) Consumers Association, "Bread", Which, August 1966.

Trade contacts point out that other retail co-operatives have experienced much less dramatic results with price cuts on bread. However it seems the degree of information told to consumers of price cuts of a significant amount has a great bearing on the size of sales response. For example "Bread 2d off" is likely to be more appealing than "Bread 1/5".

Together these instances seem to support Bain's thesis that strong product differentiation is difficult to achieve for a consumer product such as bread.

V1. Barriers to Entry :

Bain has defined the condition of entry as the advantage which established sellers possess over potential new sellers who may wish to enter that industry. He suggested that this be measured by the largest percentage by which established sellers can persistently elevate prices above competitive average costs of production and distribution without inducing potential entrants to actually enter the industry. If prices exceed this "entry-forestalling level" (61) a level of price will be reached which is sufficiently high to induce new firms to enter, and this will be the "entry-inducing" price. (62) The advantage which established sellers have depends on various barriers to entry facing new entrants.

There are four main types of barriers to entry - product differentiation, absolute cost disadvantages, economies of scale and market outlets.

Established firms may enjoy a product differentiation advantage over potential entrants because of the preferences of buyers for established firms and products when compared with new ones. In these circumstances the entrant either has to sell at a lower price than established firms, or incurs higher sales promotion costs per unit output. In both cases the new entrant obtains a less favourable margin of profit, so enabling prices of established firms to be above minimum average costs.

Secondly, established firms may enjoy lower costs of production and distribution than potential entrants because of their control of superior production techniques, favoured access to investment capital, or through preferential terms in employment of other factors or production such as management and raw materials.

Thirdly, economies of large scale production and distribution in the industry may be such that in order to obtain optimal scale, the entrant must supply a significant fraction of total industry output. But entry at this scale by the new firm means this output causes price to fall - unless established firms reduce their output. On the other hand, if entry is made at a lower level of output, costs per unit rise sharply, so again the profitability of entry is reduced.

Fourthly, new entrants may have difficulty in finding sufficient retail outlets on account of forward integration by existing firms.

(61) BAIN, J., Barriers to New Competition, p.22.

(62) Ibid, p.22.

Evaluation of barriers to entry in British manufacturing industry has not been as comprehensive as Bain's pioneering work in the United States, and it is a field where precise data is difficult to obtain. Bain stated that

"Information such as is available comes from freehand guessing often influenced by dubious general theories of technologypontifical findings are frequently intertwined with other theorizing in a manner which makes it difficult to distinguish valid deduction from vigorous but unsupported assertion." (63)

The possible sources of barriers to entry into the bread industry are now examined.

A. Product differentiation :

The disadvantage facing a new entrant to the baking industry in respect of product differentiation would be consumer attachments to the brands of established firms essentially based on the latter's advertising. The extent of the disadvantage would be measured by the promotional costs required to launch the new brand.

The fact that buyers purchase bread regularly, that it is inexpensive per unit, buy for use rather than prestige, and can easily make judgements about relative physical and other intrinsic qualities of competing brands, does not give established sellers very much of an advantage over potential entrants. It was considered above that while the attempt at product differentiation in bread was pervasive, it was not very successful and that, by the same token, sets no great or continuing problem for entrants. That is the duration of the product differentiation disadvantage is not a lengthy one to surmount.

B. Absolute cost dis-advantages :

In the case of baking, as in numerous other industries, new entrants are at a nominal and transitory disadvantage in acquiring management personnel, production know-how and other requirements for efficient productive operation. There are no strategic patents covering productive techniques and equipment which raise significant barriers to entry. It has been said of entry into the United States baking industry that

"little is required in the way of working capital with which to get started. Machinery and equipment can frequently be obtained on credit and financed by installment payments. Trucks can be leased. Raw material inventories are relatively low because of rapid turnover. Little or no finished-goods inventories exist because of perishability." (64)

(63) BAIN, J., op. cit., p.59.

(64) KAPLAN, D., Testimony before Sub-Committee on Anti-Trust and Monopoly, Administered Prices Bread Hearings, 86th Cong. 1st Sess., Washington, 1959, P. 6494-95.

Flour is a prominent item in total costs - 40 per cent - but there are no problems concerning its supply such as to provide a deterrent to entry. Much of flour used for bread production is milled by firms owned by the major baking organisations. However, flour is readily supplied to baking firms outside these organisations. The economies secured by full time working of flour mills are a strong incentive for making maximum flour deliveries to non-owned bakers. No cost squeeze by these integrated concerns is therefore likely to be incurred by the prospective entrant to the bread industry. Moreover, there remain several independent flour milling concerns who would be willing to supply flour to the new baking firm. Indeed, trade would not be declined in a period of falling flour consumption per head. Hence, vertical integration backwards into flour milling would not be necessary.

The installation of a bakery unit with two twelve sack production lines, bulk flour handling equipment and a fleet of vans would involve a capital expenditure of over £1 million. This sum would seem to be a barrier of moderate magnitude to the entrant as defined by Bain, that is a "new" firm. But it would be a minor obstacle to an established firm in a related industry. In fact the postwar-integration of flour millers into baking supports the hypothesis of Andrews and others that established firm entry is the predominant source of new entrants. (65) The fact that the capital barrier is markedly less imposing for such established firm entrants seems verified in the following instance. The flour milling firm, Cranfield Brothers Limited, has spent well over £1 million in expanding its hitherto minor bakery interests in East Anglia.

However, since the market area of one bakery is limited, national distribution of bread by a new firm would require the building of numerous plants throughout the country. Entry at such a scale, in terms of capital, would thus be very expensive, and take a considerable time to achieve. Hence the acquisition of numerous existing productive units would be the *sine qua non* of achieving national coverage for bread. This, as shown earlier, was the policy of Allied Bakeries since 1937 and the two large milling firms, Spillers and Ranks since 1953.

C. Economies of scale :

Bain has defined scale economies as "very important" when 10 per cent or more of the national or largest submarket output is supplied by an optimal plant, and costs are significantly higher at sub-optimal scales; as "moderately important" when about 5 per cent of that market is supplied by an optimal plant and costs rise significantly at sub-optimal scales, and "relatively unimportant" when the scale of optimum size is small and scale curves are relatively flat. (66) The deterrent to entry thus tends to increase as both the minimal optimal scale becomes a larger proportion of total industry (or sub-market) output, and as the rate of rise of unit costs becomes steeper as scale is reduced below the minimum optimum.

(65) ANDREWS, P.W.S., Manufacturing Business, MacMillan, London 1949, p.168-72; and "Industrial Analysis in Economics", Oxford Studies in the Price Mechanism, Wilson T, and Andrews P.W.S. (Eds.), Clarendon Press, Oxford, 1951.

Also:

HINES, H.H., "Effectiveness of Entry by Already Established Firms", Quar. Jour. Econ., LXX, February 1957, p.132-50.

(66) BAIN. J., Barriers to New Competition, p.103-4.

In the case of bread, the plant of minimum optimum scale is considered in the industry as being one with a capacity of 12 sacks of flour converted per hour. Average production costs per unit are thereafter constant for larger plants. Minimum production costs are thus reached at a plant capacity of approximately 1,500 sacks per week, i.e. the 12 sack plant working 22 hours a day for 6 days per week. The relationship between the slope of the production cost curve and the rising costs of distribution of an extended market area determine a situation of minimum production and distribution costs when the distribution area is of a radius 50-60 miles. On the assumption that this submarket area of a radius 50 miles in the United Kingdom includes 2 million persons, with per caput consumption of $1\frac{1}{2}$ loaves per week, such a minimum optimum sized plant would supply about 1/10th of the total capacity required. It would only contribute about 1/250 of total national required capacity. Although in a geographical submarket, economies of scale are most apparent, in national terms neither the importance of the proportion of industry output supplied by an optimum plant, nor the "percentage" effect of scale economies is significant.

The slope of the cost curve associated with sub-optimal scale is of moderate steepness. The Prices and Incomes Board stated that

"the economic advantages of large scale are not sufficiently great to force a rapid elimination of small plant bakeries." (67)

Nevertheless it recognised that

"there are economies to be gained from an increase in the average size of bakeries." (68)

In general, it would appear that economies of scale do not present a considerable problem to the potential market entrant into the bread industry.

D. Outlets :

Each of the four major firms either had retailing interests early in its history, e.g. Associated British Foods and the Co-operative Wholesale Society or has integrated into retailing more recently, e.g. Spillers and Ranks Hovis-McDougall, as a means of securing outlets for their bakery products.

The question is whether the prospective entrant would also have to integrate into retailing to obtain outlets for his bread. It is the opinion of the trade that it would not be necessary to rely on owned outlets. Nonetheless, there are now five national brands all competing for restricted shelf space in non-owned grocery outlets. The new entrant thus faces considerable competition from established firms in these non-tied outlets.

(67) National Prices and Incomes Board, Report, No.17, Wages in the Bakery Industry, June 1966, Cmnd. 3019, H.M.S.O., para.22, p.8.

(68) Ibid, para. 22, p.8.

E. Overall barriers to entry :

In overall terms, the barriers to entry into the bread industry would seem to fall into a "low to moderate" category. (69) This is emphasised in the present character of the industry. Members of the industry refer to it as "overplanted" by which is meant the existence of too many bakeries. The slow rate of exit from the industry has meant that the return on capital obtained at present is low in comparison with other manufacturing industries.

Indeed, the low return on capital is the strongest deterrent to entry at the present time. This is further discussed in Chapter 4.

Vll. Integration by Large Food Chains :

The most likely entrants into the bread industry are retail food chains. The bread industry has been in recent years aware of the potential threat of backward integration into baking by such retail food chains. Since the barriers to entry facing such retail chains are lower than for many other firms, their potential market entry is a significant dimension of market structure in the bread industry.

In the United States Garoian and Mueller have found a clear relationship between chain size and the extent of vertical integration among grocer-chain stores. In the case of baking, whereas in 1940 11 of the largest 20 chains had integrated into baking, 19 of the 20 had integrated into bread by 1957. (70) Retail food chains have integrated into food manufacturing on account of their ability to overcome the barrier of product differentiation which makes entry difficult for small sized firms. Their size enables them to develop consumer acceptance of their own brands and operate efficient-size manufacturing plants. Moreover, the concentrated market structure of grocery manufacturing industries, in which such sellers have considerable market power, provides an incentive to integrate. Indeed, there is a highly significant relationship between the market concentration of various food industries and the extent to which chains have integrated into them. (71)

The question in the United Kingdom is whether the major food-retailing chains will also integrate into baking, either in the form of a central bakery sited to serve a number of the outlets of the firm, or less likely as a bakery unit within the store premises. (72)

The growth of several food chains at the current time certainly makes the question of integration a relevant one. Tesco Limited, for example, has 800 stores and its sales are £190 million. It may well be that the advance of food chain retailing has still not yet developed sufficiently for the possibilities of integration to be fully apparent. However, the profitability of successful supermarket retailing will certainly make the operation of their own food manufacturing plants economically feasible.

(69) BAIN has classified overall barriers to entry as "very high", "substantial", and "moderate to low", Barriers to New Competition, p.170.

(70) MUELLER, W.F. and GAROIAN, L., Changes in the Market Structure of Grocery Retailing, Univ. of Wisconsin Press, Madison, 1961.

(71) GAROIAN, L., "Grocery Retailing", Chap. 1 in Market Structure of the Agricultural Industries, Moore, J.R. and Walsh, R G. (Eds.) p.17.

(72) In store baking in food chains in the United Kingdom is as yet a very new phenomenon. The first in-store bakery was in a Safeway supermarket in Bedford in July 1963. Seven of the 28 stores in the United Kingdom Safeway chain now have in-store bakeries. Apart from Lewis' of Birmingham and Kibby's of Cwmbran in Wales, there are few other instances of chains baking speciality bread in the store. The incentive to impulse buying is given by the freshly baked rolls and fancy bread.

Tesco Limited are expected to operate 835 supermarkets by 1975 together with some 250 self-service stores.(73) The relatively new phenomenon of supermarket retailing in the United Kingdom as a factor contributing to size of food chains helps to explain the contrasting situation in respect of chain integration to that in the United States.

Furthermore it is the opinion of the major plant bread firms that there is no incentive for the food chains to integrate into baking on account of the present low return on capital employed in bread manufacture. Moreover, retail food chains have a powerful bargaining position due to the size of their order for bread. This is reflected in the concession by bakery firms of increasing rates of discount for volume sales. Considerations of space and availability of labour were mentioned by trade sources as problems for in-store baking. The dispersed location of chain stores would also result in high costs of distribution from a chain-owned bakery.

Chains can in effect "integrate" into baking without actually operating their own manufacturing plants. This form of integration can be achieved through having a contract for the supply of own-name bread from an existing bakery.

Private label brands have rapidly increased in number for many grocery products in recent years. Several retail chains have numerous own-name products. (74) Nevertheless in baking this has not yet been widespread. J. Sainsbury have a private label wrapped bread supplied by bakeries of two of the major bread organisations. The Key Markets chain also sells a private label bread. These are exceptions to the general situation of there being little private label bread sold by retailers. This situation is in sharp contrast to the United States, where bread baked by retail chains accounts for over 70 per cent of the chain's bread sales. Bread baked by the chain itself, is sold below the price of nationally distributed brands.

The experience of food retail chains in the United States is instructive in establishing the problems involved in integration into baking. In spite of a significant distribution cost advantage, a captive market for its bakery products, and long production runs for a limited production line, several chains in the United States have found manufacturing and distributing their own private label bread to be less profitable than handling manufacturers' brands. The rationale for continuing this less profitable operation is, according to a study by Goldberg,

"to provide a low cost image for the store, to differentiate this particular chain's operation from that of other chains, to provide price pressure on the national manufacture, and to provide a traffic-builder product at a reasonable price." (75)

(73) ROGERS and MILLBOURN, A Survey of Supermarkets, Lond, January 1968. p.11.

(74) See THORNCROFT, A., "Private's Progress", Financial Times, 26th January 1968.

(75) GOLDBERG, R.A. "Marketing Costs and Margins : Current Use in Agribusiness Market Structure Analysis", Jour. Farm Econ., Vol. 47, No.5, December 1965, p.1363.

Goldberg's study, however, shows that private label sales represent a small segment of the total bread market - about 10 per cent. The problems of the product hampering further growth are, indeed, those which have been suggested earlier as impeding the beginning of integration into bread by retail chains in the United Kingdom. These problems derive from the perishable nature of the product. Private label bread manufacture is thus limited to food chains that have enough local retail outlets in an area to warrant a bakery plant of efficient size.

Trade sources in the major British retail food chains, however, expressed the view that the problems of own-baking were not insuperable and they were considering the implications of extensive integration into bread. These food chains are being cautiously watched by the major bakery firms who are very reluctant to supply private label bread.

The fastest expanding self-service chain, Tesco Limited, has turned down offers from independent bakers to supply private label bread, while considering its policy on integration into bread. It already owns one bakery firm in the West Country, Cadena Cafes Limited, and considered developing its productive capacity for extensive supply of its retail stores. It should be added that the large supermarket and self-service group of Fine Fare Limited cannot be expected to integrate into bread since it is a subsidiary of Associated British Foods.

The threat of potential competition is, on a priori grounds, a structural dimension of consequence influencing market behaviour and is verified in practice in the United Kingdom bread industry. The trade witness for the Federation of Wholesale and Multiple Bakers said in the Restrictive Practices Court in 1959 that the fear of setting prices too high and thereby inducing large food retailers to integrate into baking partially determined the Federation's moderate pricing policy. (76) This fear remains no less real at the present time.

(76) CURTIS, T.W.H. of Allied Bakeries in evidence.

CHAPTER 3

MARKET CONDUCT IN THE BREAD INDUSTRY

Bain regards market conduct as comprising three main distinguishable, but interrelated, dimensions. The first refers to the character of relationships between sellers. This concerns whether each firm in an industry acts independently without attention to the effects of its policies on competitors; or whether firms act interdependently, and perhaps collusively. The second refers to the principles (and methods) which firms, either individually or collectively observe in arriving at decisions. This dimension concerns the extent to which there are aims common to all firms in the industry as opposed to individual ones. The third major aspect of market conduct is the nature of defensive measures taken against established competitors and potential entrants. (1)

Bain's definition of market conduct, however, is not exhaustive. It omits discussion of processes which lead to changes in observed market structures. Such changes of particular strategic importance are vertical integration and firm diversification. Product differentiation can be viewed as forming a dimension of market conduct, but it was felt more appropriate to discuss product differentiation in this instance as a structural parameter.

Description of the market conduct of the bread industry is partly based on the framework suggested by Bain. The price policy of firms in the industry is first examined. This section discusses the nature of relationship between baking firms, their determination of retail margins and principles of price calculation. This is followed by analysis of the sales promotion policy of baking firms. Product policy is discussed in a further section. The final sections of the chapter described predatory and exclusionary tactics, and the diversification policy of the major firms.

I. Price Policy :

A. The changing character of seller inter-relationships :

The pattern of seller interrelationships in the bread industry has been markedly varied during the present century. In turn there has been price fixing by bakers, government price regulation, pricing agreement and prices determined by market forces.

1. Price fixing by bakers in the interwar years :

Beginning in the decades before the First World War, and continuing far more actively in the inter-war years, local associations of bakers (essentially independent master bakers) attempted to fix the retail price of bread in their areas. Such prices fluctuated to some extent with the price of flour, and prices in different areas were related to the maximum prices recommended by the Food Council for the London area. (2)

(1) BAIN, J.S., Industrial Organization, p.266.

(2) The Food Council was set up in 1925 on the recommendation of the Royal Commission on Food Prices that there should be a Food Council to fulfil a supervisory role over the staple food trades. It had no statutory powers and relied on publicity as far as bread prices were concerned to achieve its aims.

The effectiveness of price fixing by bakers' associations in different parts of the country varied widely, as did the support given to such practices by the plant bakers. The co-operative societies, while taking no direct part in the determination of the price schedules, usually followed them very closely, though in a few areas the societies consistently sold below the agreed prices.

These price-fixing agreements were adopted in an attempt to prevent undercutting of bread sold by the master bakers in their own shops the non-baking retailers shops, or by plant bakers. To enforce the price agreements, the bakers' associations threatened that their members would decline to trade with flour millers supplying flour to individual bakers selling bread below the price ruling in a district. (3) Again the effectiveness of such sanctions varied considerably.

The attempts at price fixing reflected the changes in techniques of production and development of multiple shop retailing which were taking place as noted in the previous chapter. The introduction of the travelling oven just before the First World War with its emphasis on volume, and the increase in the number of outlets for bread, with the emergence of the multiple shop organisations, provided conditions where the large plant bakers were both able and prepared to sell at lower prices to expand their share of the market. Fixed costs were a greater proportion of total costs for plant bakers compared to master bakers. This greater capital intensity of production and distribution gave plant bakers a strong interest in increasing sales.

Attempts to fix prices inevitably tended to lead to price wars. This was particularly the case in the Liverpool and Glasgow areas, where the local associations of master bakers were weak, and where the multiple shop bakers were strongly represented. In 1920 nearly 65 per cent of the total number of retail outlets owned by firms with 25 or more branches each were in the Liverpool area. (4) The proximity to abundant, cheap supplies of flour from millers situated near Liverpool explains the rapid development of multiple bakery organisations in the North West of England, where price wars were frequent and long lasting.

Master bakers who found their turnover quickly diminishing were forced to match the price cuts made by plant bakers. Master bakers also faced competition from retail chains. The multiple grocery organisations, such as the Home and Colonial, Liptons and Maypole on which some plant bakers relied as a major outlet, were also prone to use bread as a loss leader.

The lower prices resulting from a price war meant lower total revenue and bakers sought ways of maintaining turnover. The master bakers retaliated to the grocers' practice of selling bread by stocking prepacked grocery items, and the plant bakers were given further incentive to increase the number of their outlets. Even when some agreement in general terms on prices had been reached the competitive character of the trade led to other devices, such as the sales of "sides" and "ends" at lower prices to attract customers and increase turnover. Again this was particularly the case in the Glasgow and Liverpool areas.

(3) See Ministry of Agriculture Department Committee on Distribution and Prices of Agricultural Produce, Interim Report No. 4, H.M.S.O., 1924, Para.162, p.66.

(4) JEFFERYS, J.B., "The Bread and Flour Confectionery Trade", p.218.

This mixture of price fixing and price competition meant that there were wide variations in the price of bread in different areas of the United Kingdom, and even in the prices charged by different firms in the same district. In some districts in London and in the provinces, the price of bread was 8½d. per 4 lb. loaf in January 1923 : in others it was as high as 10d. for the same loaf. The prices charged by co-operative societies in May 1925 showed an even wider variation, ranging from 7½d. per 4 lb. loaf in some Midland and Eastern towns to 10d. and 11d. in a number of places in Yorkshire and the North of England.

Price competition in the bread industry was no new phenomenon. (5) But hitherto the size of production units had been essentially similar. After 1900 the competitive struggle in the baking industry represented rivalry between master bakers and plant bakers, and among plant bakers themselves.

The benefits to a firm practising price cutting were very short since competitors quickly matched price reductions. The lengthy nature of price wars which ensued before a tacit acceptance of a price level by all participants, gradually predisposed the larger plant bakers to appreciate their important and increasing mutual interdependence. It provided the impetus for the formation of a trade association representing larger producers - the Federation of Wholesale and Multiple Bakers. Its actual date of origin 1942 - however, owed much to the Second World War for the Federation was given the task of assisting the Ministry of Food in implementing the bread subsidy and price control.

2. Control 1939-1956 :

The outbreak of the Second World War signalled the beginning of a different phase of market behaviour in the bread industry. As with other industries, government regulations extensively shaped the existing market environment.

At the commencement of hostilities, controls relating to extraction rates and flour prices were placed on the milling industry. Price control was not extended to bread until 1941.

A baking subsidy had come into operation in 1940 to stabilise the costs and profits of the baker from the time he bought the flour to the time he sold the bread. The rate of subsidy was determined by the cost of producing bread, and in particular the price of flour. Since the rate of profit was fixed, changes in the price of flour were reflected in respective changes in the price of bread or the rate of the baking subsidy.

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- (5) In the middle of the nineteenth century "some fifty thousand bakers were struggling to exist in conditions of fierce competition." Even at this time millers wanted to assure themselves of outlets for their flour. Many of the bakers selling at low prices were financed or directly employed by millers. See BURNETT, "Trends in Bread Consumption", Our Changing Fare, p.66.

The baking subsidy began in December 1940 as a 4s. 0d. per sack of flour rebate paid direct to bakers, although later a graduated subsidy with an additional element for a specific number of sacks was introduced. This was based on the assumption, backed by costings, that the costs of production of the small baker were higher than those of the large baker, and that the uniform rate of subsidy was insufficient for the former to continue to make a profit. The value of this additional subsidy varied during the war, and ceased in 1945. The basic flat rate of subsidy was calculated so as to make an average profit over the whole industry of 5s. 0d. per 280 lbs. sack of flour made into bread. All bakers in England and Wales, Scotland and Northern Ireland were paid a subsidy at uniform rates in each area, irrespective of their individual trading results. Individual bakers earned more or less than the average profit margin target and costings showed wide variations in profits. (6).

After 1945 small and medium sized bakers became increasingly dissatisfied with the theoretical margin of 5s. 0d. per sack of flour. They claimed that their production costs were inevitably higher than those of plant bakers and urged the reintroduction of a graduated subsidy. The government resisted this demand on the grounds that the payment of a subsidy based on output would not be equitable to all sections of the trade and that there was no necessary relationship between profit and the value of output, as determined by volume of sales. (7)

Upon the removal of the flour subsidy in April 1953, the whole of the increase in the price of flour was transferred to the baking subsidy. The government recognised that this decision placed the small baker at a disadvantage in the purchase of flour as against larger bakers because the latter could obtain a greater discount on flour purchases. The policy of the Ministry of Food was to avoid influencing any natural competitive developments in the industry, but it also had to ensure that the position of one group was not worsened in relation to another as a result of its subsidy arrangements. Since it required all bakers to conform to the same retail price, the government felt obliged to introduce an extra subsidy of 4s. 0d. per sack for all bakers on the first 25 sack of weekly output. (8) It contemplated dropping this extra subsidy in 1954 on the grounds that in practice the gap between the prices paid for flour by the smaller and larger producers had not been as wide as had been anticipated. However, as a result of strong pressure from the smaller bakers the subsidy was retained explicitly to help master bakers continue in business. The permitted profit margin was increased in October 1954 to 7s. 6d. per sack of flour to remunerate the additional capital employed since the beginning of price control and allow for inflation.

The number of bakers claiming the total subsidy fell throughout this period however as Table 8 in Chapter 2 shows. It was argued in that chapter that the plant baking section of the industry became an increasingly dominant one since master bakers found bread production unprofitable. There was practically no competition in price between master bakers and plant bakers

(6) In May 1952, actual average net profits of master bakers were 2s. 10½d. per sack : of plant bakers 6s. 0½d. and of co-operative bakeries 9s. 9½d. Hansard, 30th May, 1952 Col. 1864.

(7) Statements by the Minister of Food in House of Commons reported in Hansard, 11th June, 1951, Col. 94 and 26th May, 1952, Col. 1658.

(8) Statement of Minister of Food, Hansard, 16th July, 1954, Col. 2384.

during the period of price control since the industry regarded the maximum price as affording low profits. The controlled maximum prices were in effect minimum but fixed prices.

The characteristics of the baking subsidy and price control were thus major causes of the diminishing numbers of master bakers. In the controlled market environment between 1941 and 1956, the nature of government control in treating the whole bakery trade as if it were homogeneous had a significant impact on the relative competitive strength of small and plant bakers.

3. Price agreements 1956 -1959 :

Cuthbert and Black have described the bread industry in postwar years in the following manner :

"the market structure of this industry - an important oligopolistic sector and a large fringe of small scale producers all producing a fairly homogeneous product - is usually associated with the phenomenon of price leadership. In the United Kingdom it resulted in comprehensive price agreements." (9)

These agreements were implemented by the trade associations representing the two major sections of the industry - plant, bakers by the Federation of Wholesale and Multiple Bakers (Great Britain and Northern Ireland) and the affiliated Wholesale and Retail Bakers of Scotland, and small bakers by the National Association of Master Bakers, Confectioners and Caterers and the Scottish Association of Master Bakers. Price agreements in the baking industry were not a new phenomenon of market behaviour for, as an earlier section has shown, price fixing by bakers associations was extensive in the interwar years. But after 1945 and especially after the end of price control on bread in 1956 price agreements between plant bakers were based on national price recommendations from the Federation of Wholesale and Multiple Bakers.

Before price control on the bread industry was removed in September 1956, the Minister of Agriculture, Mr. Heathcoat-Amory, asked representatives of both baking trade associations to attend a meeting at which he was reported to have expressed the hope that, following the withdrawal of the bread subsidy, the trade would use its freedom to fix bread prices, in a statesmanlike manner, having regard to the economic position of the country. (10) Following this meeting, the plant bakers decided that the Main Committee of the Federation of Wholesale and Multiple Bakers should from September 1956 recommend prices to members of the Federation.

(9) CUTHBERT, N. and BLACK, W., "Restrictive Practices in the Food Trades II", Jour. Ind. Econ., Vol. X. No.1. November 1961, p.57.

(10) Evidence by the Federation of Wholesale and Multiple Bakers in Restrictive Practices Court 1959 : cited in the court's judgement of 16th December, 1959, Law Report I.R.P. in re Federation of Wholesale and Multiple Bakers Agreement. The Incorporated Council of Law Reporting for England and Wales, London, p.399.

Between September 1956 and December 1956, different prices were recommended for port and inland areas to take account of different flour costs, but thereafter a uniform price was recommended for the whole country. The eight affiliated regional associations transmitted the Federation's prices to their members and some made more detailed recommendations. For example, the Lancashire and Cheshire Wholesale Bakers' Association not only recommended basic prices, it also fixed discounts for various classes of customers and for bulk purchases.(11)

In July 1957 the Registrar of Restrictive Trading Agreements referred the recommendations of the Federation to the Restrictive Practices Court and the case was heard in November 1959. The Court hearing provides excellent material for the study of the market conduct of the industry between 1956 and 1959 and is the basis for the following description of the activity of the Federation of Wholesale and Multiple Bakers.

The Federation had, what the Court described as, 43 group and 120 independent members in 1953, but such was the growth of the large groups in the next six years that by 1959 there were 142 group and only 51 independent members. (12) It accepted for membership at this time only bakers who used at least 200 sacks of flour per week or whose sales exceeded £100,000 annually.

In the Restrictive Practices Court the Federation attempted to justify the introduction of the system of recommended prices on the grounds that without the experience of postwar trading conditions (government price control having lasted for 15 years) there was speculation on how the trade would fare in a free market. It claimed that plant bakers, because of their pattern of production costs, wanted to maintain a steady turnover. The Federation held that its price recommendations reduced the danger of loss of turnover through price wars. There can be no doubt that the long period of price control following the price wars of the pre-war period predisposed the industry to attempt to retain price stability and eliminate the uncertainty of price competition.

In the course of the hearings it emerged that the Federation had radically changed its pricing arrangements in April 1958, after the agreement had been referred to the Court. (13) Prior to September 1956 the price of standard bread fixed by the Ministry of Food had been based on cost investigations which the Ministry carried out regularly. In June 1956 the Federation made arrangements to recommend prices to its members when price control ended, but no arrangements were made to continue the cost investigations to provide a basis for these price recommendations. In April 1958, when the necessity of justifying its position before the Court became apparent, the Federation made two changes in its arrangements. Firstly, it introduced a procedure for basing its price recommendations upon sample costings similar to those that had been carried out by the Ministry of Food. Secondly, it changed the form of its recommendation from a minimum price to a maximum price for standard bread.

(11) CUTHBERT, N. and BLACK, W., op. cit., p.58.

(12) Law Report I.R.P., p.387

(13) The Agreement was referred to the Court by the Registrar on July 12th, 1957.

The Federation claimed consumers benefited from the fixing of a maximum price for bread and a recommended retail margin of 1s. 3d. per dozen loaves. The Federation held that the adoption of a maximum price by a very influential part of the industry not only prevented members from otherwise charging more, but also tended to keep the price down by its influence on master bakers.

The Federation's trade witness, Mr. T.W.H. Curtis, argued there was no desire within the trade for a reduced price. This was due to the fact that a firm had "not enough start" to increase turnover because reduced prices were quickly matched by other firms. Furthermore, he claimed the importance of price as a competitive factor was reduced by the characteristics of the product. These characteristics were the limited time available for delivery and the restricted distribution area of any one bakery. Thus bread could not be distributed fresh over a very wide area even if low prices were charged.

Mr. Curtis said that many members of the Federation favoured an increase in prices following decontrol on account of the low profitability of bread manufacture towards the end of the control period. They had been persuaded to adopt a moderate price policy by a minority of members.

The Federation, he said, had taken a long term view by aiming at low profit margins rather than attempt to achieve high profits in the short run. Compelling reasons for such a policy were the restraint urged by the Minister, the feeling that an increase in retail margins could thereby be more easily contained, and the sense of public responsibility developed from the wartime period. He acknowledged that other determining influences were the fear of multiple retail chains baking their own bread if high profits were made, and the fact that the long history of statutory control of bread prices meant the trade was sensitive to public opinion and to charges of "profiteering".

The Federation also pointed to the results of a market survey to suggest that where the Federation's influence was strong, sales of bread were invariably made at the recommended price, whereas where its influence was weak, most sales were at higher prices. (14) It claimed the elimination of the recommendations would therefore mean that prices of this basic food commodity would rise. The Federation suggested that although there had been a fall by one half in the number of bakers since 1935, the public benefited from the continued existence of small bakeries distributing in rural areas. These bakeries, it claimed, would disappear in a period of intense price cutting between the large plant bakers with consequent loss of convenience to consumers. Such concentration was further claimed to be undesirable by reason of the fact that an interruption in the supply of bread due to weather, strike action or war even for a few days over large areas would have most serious social consequences.

The agreement was judged to be against the public interest by the Court in December 1959. The Court ruled that the pricing formula relied on unsatisfactory sample costings and that it was not necessary or realistic to continue the methods adopted by the Ministry of Food in the control period which had been evolved to meet the particular conditions of wartime.

(14) Law Report I.R.P., pp. 469-70

The pricing formula appeared to show favourable average rates of profits in comparison with other industries, (see Chapter 4, page 86). The Court considered that since the demand for bread was declining, the bakers' stated aim of maintaining a steady volume of sales was likely to result in a reduction in prices.

It stated that when the change from fixed to maximum prices occurred in April 1958 there was no alteration in the levels of prices recommended. No announcement to the public was made until November 1958, on the occasion of some price changes. The Court thus argued that the Federation's recommended maximum price had in effect operated as a fixed price, so that there was no benefit to the public by virtue of their description of the price as "maximum". (15)

During the period from the end of price control to the time of the hearing of the Federation's case, the recommendations of the Federation tended to ensure uniform national prices among plant bakers. Admittedly local price was tended to occur as the two flour milling firms, Ranks and Spillers, and Allied Bakeries sought to achieve national distribution. The forward integration by the milling firms had tended to be carefully and strategically planned so as to prevent a confrontation with Allied Bakeries. But as their interests became more extensive, the juxtaposition of bakeries owned by these firms was such that overt price competition broke out in the mutual efforts to expand market shares in local areas. For example, in North Devon, price competition between an Allied Bakeries subsidiary, Goodbody Limited of Plymouth, and a Ranks acquisition, Hill Palmer and Edwards Limited of Exeter, forced the price of standard bread down from 10½d. per loaf to 7½d. before a price agreement was secured.

But, in general, the Federation price recommendations were adhered to by plant bakers, and in view of the increasing dominance of plant bread production, they also tended to set prices for the rest of the industry. The Federation's price recommendations, indeed, formed the basis of the price agreements of the National Association of Master Bakers.

The National Association in the main represents small and independent bakers although in practice there is a good deal of overlapping membership with the Federation of Wholesale and Multiple Bakers.

Whereas the price fixing arrangements in the post-war period by plant bakers in particular areas were based on recommendations from their national trade association, the Federation, in the case of the master bakers, they were left to a considerable extent to the regional and local associations affiliated to the National Association of Master Bakers.

Following the passage of the Restrictive Trade Practices Act in 1956 40 affiliated master bakers' associations with price agreements were registered with the Registrar of Restrictive Trading Agreements. All associations fixed or recommended the prices of standard bread, and some (like the affiliated Scottish Association of Master Bakers) also fixed prices for other breads and for flour confectionery. A few (like the Cardiff and District Master Bakers' and Confectioners' Association) made formal arrangements to penalise members who did not conform to the common price policy.(16)

(15) Law Report I.R.P., p. 466.

(16) CUTHBERT, N. and BLACK, W., op. cit., p.59.

The prices which were fixed tended to follow the changes in prices recommended by the Federation, but on average to be somewhat higher.

The Scottish Association of Master Bakers, formed in 1891, represents both plant bakers and master bakers in Scotland, so that virtually all the members of the Wholesale and Retail Bakers of Scotland also belong to the Master Bakers' Association.

At the end of price control in 1956, the two associations asked the Scottish Bread Costings Committee (which had been formed in 1940 to provide data for the determination of the subsidy) to continue its cost investigations and to make recommendations on standard bread prices and wholesale margins. On the basis of this information, the associations recommended to their members a basic price for the area south of the Caledonian Canal and differentials to be added to the basic price in areas to the north. These differentials were decided by the associations' 22 divisional committees, partly on the basis of transport costs, partly on the committees' "own personal knowledge of local circumstances". (17).

In 1958 the agreements of the two associations were referred to the Restrictive Practices Court in Scotland and in July 1959 the Court ruled that the agreements were against the public interest.

The Court criticised the inadequacy of the costings made by the Scottish Bread Costings Committee, and in general terms did not rate the stabilisation of bread prices as a benefit. It did not accept the Associations argument that the high degree of concentration of production would lead to rising prices of bread in Scotland. (18)

Thus, both north and south of the Border government control in wartime provided the stimulus to the collective price fixing which prevailed after decontrol in 1956. The imposition of price control and the subsidy arrangements gave bakers a low rate of profits but achieved the goal of price stability. After fifteen years of such a price regime firms in the industry mindful of the pre-war problems of achieving a consensus on prices, were more than predisposed to continue such stability in the form of price recommendations made by the wartime created Federation of Scottish Bread Costings Committee.

4. Price competition since 1959 :

The effect of the Restrictive Practices Act through the judgements of 1959 on the bread industry was thus to make illegal all the agreements on prices and margins between master bakers and plant bakers in Scotland, and between plant bakers in England and Wales.

The agreements between master bakers in England and Wales did not come before the Court but the Act has had a substantial indirect effect on restrictions in this segment of the industry. Even before the Scottish bread case (and presumably influenced by the definitive rejection of price fixing in the Yarn Spinners case) (19) the master bakers' associations began to vary their agreements to remove all restrictive clauses relating to prices and discounts.

(17) Court Judgement in re Wholesale and Retail Bakers of Scotland Associations' Agreement, Law Report I.R.P., p. 360.

(18) Ibid, p.382.

(19) Agreement between Yarn Spinners which Court ruled against public interest on 26th January, 1959. See Law Report I.R.P. in re Yarn Spinners Agreement, p.118

The use of agreements to implement price formation in the industry was thus ended and nominally at any rate, the determination of bread prices returned to market forces. On a priori grounds, however, the oligopolistic structure suggests that tacit collusion, perhaps in the form of price leadership, could be expected, reinforced by the background of habitual co-operative behaviour carried over from the past.

Following the Court judgement in 1959, the Federation of Wholesale and Multiple Bakers gave an undertaking that its price fixing activities would be curtailed. This has left it with the usual functions of a trade association, i.e. those of representing the interests of plant bakers in the context of government policy towards the baking industry in particular, and in commerce in general. In addition, the Federation is the negotiating body for plant bakers in the determination of wages and conditions of working. It negotiates with the Bakers' Union in the case of production workers and with the five unions who represent distribution employees and transport drivers. (20)

The Federation does not undertake costings from a sample of firms and, in fact, its permanent staff does not receive a continual flow of specific or detailed information from particular organisations and firms. The rivalry between the major organisations is now such that each is very reluctant to supply information to such a body in case a competitor derived an advantage thereby.

The membership of the Federation by firms belonging to one of the four major organisations at present is an even more predominant one than in 1959. The Federation now has a membership of about 240 of which 190 are owned by the major organisations. But even in the 40 or so ostensibly independent firms, the national organisations have a minority shareholding. Only about 10 truly independent baking firms are thought to be members of the Federation.

Although the Federation has made no price recommendations since 1959, in practice its affiliated area structure provided the basis for information agreements. Between 1959 and 1965 firms in certain areas sent details of their prices and rates of discount to the local secretary of the area who made them available to all members. Following the reference of the industry to the National Prices and Incomes Board in September 1965 these agreements were terminated. Circulation of discount rates seems to have been most active in the North Western Area of the Federation. (21).

Prices of standard and other bread have been freely exchanged and discussed in the regional and local associations of the Master Bakers' Association since 1959. There is a greater interest on account of their predominant market share in toto, however, in determining whether a tacit price agreement exists between the four largest plant firms.

(20) These are The Bakers' Union; the National Union of General and Municipal Workers; the Transport and General Workers' Union; the Union of Shop, Distributive and Allied Workers and the United Road Transport Union.

(21) O'BRIEN D.P. and SWANN D. Information Agreements, Competition and Efficiency MacMillan, London, 1968, p.68.

These firms are strongly interdependent because each supplies a large enough fraction of the market that price and output changes significantly affect the sales and profits of rivals. Complete independence in market conduct strategy by any of the major firms in the bread industry is thus not possible.

When production is concentrated in a few firms the problem is to determine whether there is interdependent action without agreement, i.e. where firms condition their decisions in the light of anticipated actions by rivals, or whether there is collusion, either in the form of a covert understanding between firms or overt agreement on such matters as prices.

The increases in the price of bread for one of the major baking firms since decontrol in September 1956 are shown in Table 14. The National Prices and Incomes Board observed that

"the prices of the standard loaf over the last few years have risen by exactly similar amounts throughout the country and at approximately the same time. On each occasion one or other of the major groups has increased the price of the standard loaf and the industry as a whole has followed its lead." (22)

Thus in every instance of price changes save one (that in January 1966) the dates shown in Table 14 have been almost the same as those on which prices were changed by the other plant baking firms.

The simultaneous change in prices in January 1967, by all firms in the industry was due to the operation of the government's price policy. Firms had been unable to raise prices until the permitted date. The parallel increases of February 1968 were also the result of government intervention. The permitted price increase was partially determined by the effects of devaluation, and partially by the aim of raising the profitability of bread manufacture. Again the identical timing of price changes of January 1969 was due to the government's prices policy together with the question of the introduction of decimal coinage. (See chapter 4)

The only instance when a price change has not been simultaneous took place in January 1966. The National Prices and Incomes Board had recommended in its first report that bakers should not increase their prices in July 1965 but withhold them for six months. (23) In this instance Ranks Hovis-McDougall increased its prices two weeks before the rest of the industry. This increase in price before the date approved by the government was taken as a protest at what was considered to be the undue delay in the publication of National Prices and Incomes Board interim report on wages in the baking industry. (24)

The simultaneous price changes in 1967 and 1968 could thus have been expected of the industry. The change in prices in 1966 was, however, the exception to the consistently parallel character of price adjustments of firms in the decade since decontrol.

(22) National Prices and Incomes Board, Report No.3, Prices of Bread and Flour, September 1965, para. 43., p.12, H.M.S.O. CMND. 2760

(23) National Prices and Incomes Board, op. cit., para. 64, p.19.

(24) National Prices and Incomes Board, Report No. 9. Wages in the Bakery Industry, (Interim), January 1966, H.M.S.O., CMND2878.

TABLE 14 BREAD PRICE CHANGES SINCE DECONTROL IN SEPTEMBER 1956 BY ONE OF THE
MAJOR BAKING ORGANISATIONS

			Unwrapped	Wrapped and Sliced	Unwrapped	Wrapped and Sliced
			28 ounces		14 ounces	
			s. d.	s. d.	s. d.	s. d.
1956	September	Port Areas	10.	11.	6.	7.
1956	September	Non-Port Areas	10½.	11½.	6½.	7½.
1956	December	Port Areas	10½.	11½.	6½.	7½.
1957	January	All Areas	11.	1. 0.	6½.	7½.
1957	June 3rd	All Areas	10½.	11½.	6½.	7½.
1960	April 18th	All Areas	11.	1. 0.	7.	8.
1960	December 12th	All Areas	11½.	1. 0½.	7.	8.
1961	June 19th	All Areas	1. 0.	1. 1.	7½.	8½.
1962	February 5th	All Areas	1. 0½.	1. 1½.	8.	9.
1963	June 17th	All Areas	1. 1.	1. 2.	8.	9.
1963	December 9th	All Areas	1. 1½.	1. 2½.	8½.	9½.
1964	November 2nd	All Areas	1. 2½.	1. 3½.	8½.	9½.
1966	January 25th	All Areas	1. 3½.	1. 4½.	9.	10.
1967	January 16th	All Areas	1. 4½.	1. 5½.	9½.	10.
1968	February 12th	All Areas	1. 6.	1. 7.	10½.	11½.
1969	February 3rd	All Areas	1. 7.	1. 8.	10.	11.

NOTE: There are minor increases in parts of South West and West Wales. These refer mainly to outlying villages and prices are otherwise uniform in England and Wales. The price of speciality breads is higher and varies throughout the country.

The National Prices and Incomes Board took the view that there were special factors in the bread industry militating against price competition. The inelastic nature of demand was of paramount importance. The Board stated

"a reduction in price does not enlarge the market nor does any practicable reduction significantly enlarge the market share of one competitor against another. A price reduction in order to be effective in attracting new customers, should be at least one penny per loaf, but such a cut would have a disproportionate effect on profits since it would represent some 7 per cent of the selling price of bread." (25)

It concluded that

"the general uniformity of price for the standard loaf as between one manufacturer and another is probably inherent in the nature of the industry." (26)

But even if an individual firm cannot be expected to make price reductions and price uniformity is to be expected, it is still important to account for the coincidence of price changes since the lifting of controls in 1956.

The Federation of Wholesale and Multiple Bakers told the National Prices and Incomes Board that

"(no) trade price agreement, tacit or otherwise exists, particularly in view of the decision taken on a past agreement by the Restrictive Trade Practices Court in December 1959.(27).

Trade contacts deny that there is a single price leader who consistently sets prices which act as a barometer for the industry as a whole or sets prices as a dominant market seller.(28) The report of the National Prices and Incomes Board seems to support the view that price leadership does not exist in the bread industry. (29)

Indeed the existence of dominant firm price leadership in the industry would be surprising. The differences in market shares held by the three largest firms would not seem large enough for one of them to assume the identity of being the industry's dominant price leader.

Several trade contacts said that the parallel increase in prices follows from the simultaneous incidence of changes in the major cost items - flour and wages. Wage costs change simultaneously for all firms on account of the Federation of Wholesale and Multiple Bakers wage agreement with the Bakers' Union and unions representing distributive workers. Changes in imported wheat prices similarly affect all firms at practically the same time, varying slightly according to the forward commitments for grain entered into by each firm. Since wage and flour costs together comprise 70 per cent of total costs, (30) there is, trade sources claim, a similarity in

(25) National Prices and Incomes Board, Report No.3, Prices of Bread and Flour, para. 45, p.13.

(26) Ibid, para. 45, p.13.

(27) Ibid, para. 44, p.12.

(28) "Barometric" and "Dominant firm" price leadership are discussed by STIGLER, G.J. "The Kinky Oligopoly Demand Curve and Rigid Prices", Jour. Polit. Econ., Vol. LV, October 1949, pp.444-5, also MARKHAM J.W., "The Nature and Significance of Price Leadership", Amer.Econ.Rev., Vol. XL1 (1951) pp.891-905.

(29) Its wording is significant "(When) one or other of the major groups has increased the price"

(30) National Prices and Incomes Board, Report No.3., Prices of Bread and Flour, para. 23, p.6.

the pattern of cost changes for each firm. If one major firm intends to raise prices, it can thus be reasonably sure that rivals will follow because of similar pressure on the profitability of bread production to them.

Furthermore, an intended price increase takes roughly two weeks to implement as a result of the time required to print and circulate new price lists. Together with the fact that non-tied outlets have to be informed in advance of such price changes, this means that one firm's intentions on prices is soon known to other firms.

Over and above these factors is the distinct feeling in the industry that there is a low margin of profitability in bread production. Since all are equally keen to increase prices on incurring cost increases, the fear of a "kinked" demand curve which could exist to one firm on being the first to adjust prices, is removed by mutual appreciation of the cost-price situation they all face.

This interpretation of price behaviour in the bread industry would indicate that the situation could be described as one of interdependent behaviour without agreement.

However, the conspicuously parallel price policies of the major firms since 1956 could also be the product of collusion. The industry would of course claim that covert collusion on prices does not now occur. However, one does not have to go far within the industry to encounter informed suggestions that this claim could not always be justified. Such evidence could lead one to conclude that, even if changes in costs are common to all firms, and that in consequence one firm in raising its prices to reflect cost increases feels reasonably sure others will follow, there is a code of understanding which is explicitly adhered to by all the major firms.

5. Price competition at retail level 1956-68

In this section the size and determination of the retail margin for bread are discussed.

Price competition at retail level has been a very recent phenomenon in the bread trade. However, until 1959 this can be explained by the existence of resale price maintenance.

Before 1939 the retail margin averaged 6d. per dozen 2 lb. loaves and rose to 9d. per dozen soon after 1945. In the period of price control and until February 1957, the determination of the retailers' margin was left to the regional associations of the Federation. The average was 1s.0d. per dozen 28 oz. loaves. In February 1957 the Federation made a general recommendation of a margin of 1s 3d. per dozen loaves for all areas. Part of this increase in the retail margin merely reflected price inflation, but the Federation in the period after 1956 was much concerned to prevent the size of the retail margin being increased.

The Federation stated in the Restrictive Practices Court that the benefit of a fixed retail margin to consumers lay in limiting an upward movement of retail price that would otherwise be caused by the concession of extra margins to food retailers. It certainly took a strong line in attempting to secure a fixed retail margin.

The Federation changed the character of its price recommendations in April 1958 from a fixed to a maximum retail price which would suggest a less rigid regulation of the retail margin. In practice, a very critical view was still taken of a retailer selling loaves below the normal price, and of wholesale discounts greater than the standard level.

The Secretary of the Federation reaffirmed the trade association's policy of resisting high rates of discounts to retailers in May 1958, following the claim for a higher rate of discount from a multiple food chain in the West Midlands. His letter to the local association was quoted in the Court by Counsel for the Registrar and noted by the Court in its judgement. The secretary had stated in his letter of May 2nd, 1958.

"There is, too, the danger that a sufficiently high discount will introduce price cutting at retail level, a result which might have the heaviest effect in the West Midlands area. It is obvious that wholesale discounts must be kept to a minimum, not only for the protection of retail business, but also in the public interest.....I feel particularly disturbed since I have endeavoured, and to date with a measure of success, to have all Federation members, be they independent or in groups, comply with the arrangements and agreements made freely in open discussion. This policy, I had hoped, would be in everybody's interests and prevent the outbreak of price-cutting wars which were so ruinous 20 years ago." (31)

Counsel for the Registrar also noted in Court that the Federation had put pressure on a baking firm supplying bread to a newly opened supermarket which was selling at 1d. below recommended retail prices. It obtained the agreement of all the firm's competitors that none would step in if the firm stopped supplies.

The judgement of the Court also pointed out that

"when the change was made from fixed to maximum prices in April 1958, there was no alteration of the figures and there was no announcement to the public

There is nothing to show that the independent retailers or the purchasing public had any knowledge of the newly-acquired "maximum" character of the recommended prices in April or May 1958, or at any time before November, 1958, when on the occasion of a change in some of the prices, public announcements were made in the Press clearly stating that the prices were maximum and sales could be made at lower prices. The absence of any public announcement at the time when the change from fixed to maximum prices was made tends to show that at that time the Federation was not expecting or intending that the new description of the prices as maximum would have far-reaching practical effects. Next, there was no softening of the Federation's uncompromising attitude towards price reductions, at any rate if they could be described as "price cutting". (32)

(31) Law Report I.R.P. p.464.

(32) Ibid, p.463-4.

The Federation could thus hardly argue convincingly that the general uniformity of prices throughout the country followed from the fact that retailers could not afford to sell bread at other than the recommended maximum price when it insisted on rigid resale price maintenance. The Federation in evidence earlier had, however, claimed that

"the application of the "loss leader" technique to bread was particularly objectionable as it tended temporarily to increase the sales of some bakers to the detriment of others and some bakers might, in consequence, be left with unsold and wasted bread." (33)

The Court, however, in its judgement argued that

"the intervention of the fixed retailer's margin of 1s. 3d. per dozen loaves of standard bread introduces an element of rigidity into the price structure and would hinder sales to independent retailers at reduced prices, if any member of the Federation were minded to make such sales." (34)

The Court pointed to the fact that for a baking firm to reduce its price to retailers it would have to ensure that the retailer did not absorb the extra margin by maintaining retail prices. It noted that the Federation's trade witness had shown in cross-examination that there was no standard procedure for resolving this potential conflict between sales which, in principle, were permitted below maximum prices and a fixed retailer's margin. (35)

Since the Court ruling in December 1959, retail margins have steadily risen as a result of the extra discounts conceded by the groups to large food retailers. This has taken place in the context noted in Chapter 2 of a tendency to bilateral oligopoly between the major bread firms and multiple retailers. Whereas the standard retail margin on bread is 12½ per cent the average for major retailing food chains is now between 18 per cent and 20 per cent.

Although food chains have used tea, sugar and coffee as loss-leader items (defined as sales at or below cost price) bread has invariably been excluded from this category of goods. This appears to have been due to the continuing discouragement by the major baking firms of retailers considering price cutting on bread, and the low size of the retail margin in value terms on bread compared to other products. Other grocery items could be reduced in price and be a more attractive loss leader to draw consumers to the store.

The National Prices and Incomes Board thought part of the reason for uniformity in bread prices lay in the unsuitability of bread as a loss-leader on account of such factors as "the short shelf life and bulkiness of bread". (36)

(33) Ibid, p.413-4.

(34) Ibid, p.465.

(35) Ibid, pp.465-6.

(36) National Prices and Incomes Board, Report No.3. Prices of Bread and Flour, para. 45, p.13.

Ironically price competition began on the date when the National Prices and Incomes Board recommended a price increase following its investigation of the wage structure of the industry. Several retail co-operative societies in the Manchester area reduced bread prices by 2d. per standard loaf in January 1967 at the time of the permitted increase in prices approved by the government. (37) The most prominent campaign however took place in the North East of England where a consortium of 14 retail co-operative societies reduced bread prices by 4d. per standard loaf.

The leader of the consortium has indicated that the need in present food retailing conditions is to draw consumers into food stores by significant price reductions, and he had seen no reason not to regard bread as a suitable loss leader. Indeed in contrast to the National Prices and Incomes Board, he claims bread is an excellent loss leader item since in the nature of its perishability it cannot be stored and housewives need to buy at least twice weekly. It is thus, in the terminology of retailing, an excellent "traffic builder" for increasing total grocery sales.

The price reduction of 4d. per standard loaf, adopted was regarded as the critical level at which consumers would readily respond. (38) The decision to sell bread below cost price was made in late 1966, but was withheld until the permitted general increase in bread prices on 16th January, 1967 so as to derive maximum publicity from the price-cutting campaign.

Sales of bread of the North-East co-operative societies were reported as showing "a fabulous increase". (39) Sales in fact rose 300 per cent, and turnover of other grocery items at "normal" prices rose 27 per cent, strongly supporting the hypothesis that bread is a suitable loss leader grocery item.

The co-operative societies were supplied with bread from a Federal Co-operative Wholesale Society bakery which in conformity with the policy of the other major organisations was officially against price cutting.

The dramatic increase in trade experienced by these societies was sufficiently great in its impact on other major bread firms sales for the latter to approach the consortium and suggest that all retailers enter a retail price agreement on bread. A person claiming to represent "all supermarkets and multiples" (40) threatened retaliatory action if the societies did not rescind their price reductions.

The representative calling himself "Mr X" was stated to be "a senior official of a bakery and supermarket organisation" (41) However, there can be no doubt that other non-co-operative bakery organisations supported the approach made to the consortium. The latter, far from fulfilling the expectation of bakery firms and multiples that the co-operative societies would cease price cutting, disclosed the approaches of "Mr X" to the press and derived further publicity for their campaign. This campaign was already being promoted through local television and press advertising.

(37) The Grocer, 21st January, 1967, p.36; also 4th February, 1967, p.25.

(38) This case appears to substantiate the hypothesis contained in the publication "The Money She Might Have Spent", Lever Bros. (1968) - that critical price reductions lead to dramatic responses in sales.

(39) The Grocer, 4th February, 1967, p.25.

(40) The Grocer, 11th February, 1967, p.33.

(41) The Grocer, 18th February, 1967, p.22.

No further approaches were made by "Mr. X" and the consortium's campaign ended in April 1967 when each society once more adopted an individual price policy for bread. Some societies continued to sell bread below normal prices and one, has consistently sold 2d. below the general level of prices for bread up to the present time.

The significance of the price cutting campaign for bread initiated by the retail co-operative societies in January 1967 was that it set a precedent for large food chains to follow. Since then several retail food chains have felt able to use bread as a loss-leader or sell at cut prices without fear of being subject to sanctions from the baking firms. In the "test case" of January 1967 the bakery organisations found the threat of a retaliatory price war an insufficiently strong deterrent to large retail chains to sell bread at reduced prices. The Sunderland Co-operative Society again used the occasion of a permitted bread price increase in February 1968 to cut prices on standard loaves. The Manchester and Salford Co-operative Society, another retail society which had reduced its prices in January, 1967, also reduced prices in February 1968 by 2d per standard loaf. The Lancastria Co-operative Society cut 2d off the price of large loaves in June 1968 and was selling these loaves at 3d below the usual price level in the following November. Since it did not increase its prices at the time of the general rise in February 1968 it has been selling since then at 4d below the normal maximum retail price. Other food retail chains, e.g. Tesco Limited, F.W Woolworth Limited and J. Sainsbury Limited, have practised price cutting on bread over short time periods and claim significant rises in sales.

The baking firms do not support such campaigns and offer no encouragement to food chains intending to sell bread at below recommended retail prices. One indeed, attempted to induce a retailer to rescind his price reduction in September 1967. (42) There appears no reason why price competition at retail level should not continue in the future. Nevertheless price cutting will have to be much more extensive and the size of whole-sale discounts conceded by baking firms rise considerably further before the major organisations feel forced, because of falling profit margins, to compete on price directly.

B. Principles of price calculations 1956-68 :

A previous section has discussed the nature of price determination in the context of market relationships between bakers in the past decade, Bain considers that the total market conduct pattern concerning prices includes not only these interrelationships but also the principle followed in setting prices, and the method employed to that end. He has suggested that the pricing principle could be one of joint profit maximisation, where the aim is the aggregate of profit for all firms in the industry. (43) Alternatively, an individual firm could attempt to maximize its profits at the expense of the total profits of all other firms. There is an infinite number of situations between these two polar extremes. Bain has recognised however, that the methods used in price calculations to implement the pricing principle in question are of lesser significance. (44)

(42) The Times, Business News, 26th September, 1967.

(43) The theory of joint-profit maximisation is discussed by FELLNER, W., Competition Among the Few, Alfred Knoff, New York, 1949, Chaps.4 and 5, pp.120-174.

(44) BAIN, J.S., Industrial Organisation, pp. 281-7.

In the bread industry the period during which price recommendations were made by the Federation would seem to have been one in which the type of pricing principle was nearer to the aim of joint profit maximisation rather than independent profit maximisation. The recommendations served as a co-ordinating mechanism of all individual firms' decision. However it could not be claimed that this mechanism ensured for established firms the greatest possible aggregate of profits. The maximum size of this profit aggregate would most probably have required much higher prices than were in fact charged. Nevertheless, membership of the Federation suppressed rivalrous moves on the key variable of price.

The trade witness for the Federation in the Restrictive Practices Court mentioned a number of factors which had induced the Federation not to adopt a price policy which would result in high rates of profit in the short term. There was the fear that multiple food retailers would be induced to bake bread and the sensitivity of the industry to charges of profiteering on a staple foodstuff.

The method of price calculation employed from September 1956 to April 1958 was to recommend fixed prices on the basis of general estimates of changes in raw material costs, especially flour, with the aim of achieving an average profit margin of 18s.0d. per sack of flour converted and later 15s. 0d. per sack. (45) Following the reference to the Court the Federation reintroduced as far as possible the sample of costings used by the Ministry of Food between 1941 and 1956. It made the modification of making a deduction of a sum equivalent to $7\frac{1}{2}$ per cent of production costs from the average total costs of the sample. The Federation told the Court this deduction was deliberately made in order to bias costs below the average towards the lower-costed producers. The sample size varied between 48 and 52 firms. Costings were made every quarter from April 1958 until the hearing of the Federation's case in the Court.

Since the Court judgement in 1959 production has been increasingly concentrated into the hands of a few firms, between which a code of understanding on prices seems to have been established. On a priori grounds one might therefore expect the pricing principle of these firms to remain closer to joint profit maximisation than to independent profit maximisation. The problem in testing this hypothesis is the inaccessibility of information on pricing principles and methods by firms in the period since 1959 as compared with that documented in the period up to 1959. Indeed detailed evaluation of the total conduct pattern, including identification of the principles and methods of price calculation employed is often not possible without examination of the resulting market performance itself. As Bain has concluded,

"(for) a full description of the character of conduct itself we obviously need to examine market performance directly." (46)

(45) Law Report I.R.P., p.405.

(46) BAIN, J.S., Industrial Organisation, p.292.

The total profit aggregate of the industry is greater than would be the case if baking firms competed in price. However, the size of this profit aggregate has been reduced by competitive action of the major firms in attempting to increase their respective market shares through non-price competition. It has also been reduced by the impact of the steadily rising bargaining power of large food retail chains. The nature of this non-price competition is discussed in a subsequent section.

The assumption of profit maximisation as a goal of firm and industry behaviour in the economic theory of the firm has been widely criticised. The disadvantages of profit maximisation in the short term were stated by the Federation trade witness in the Court in 1959, Trade contacts further stated the problems of upward price adjustments in the period since 1956 arising from the reluctance of successive governments to see the price of a staple foodstuff, such as bread, increased. (47) The author has thus attempted to enquire whether firms in the bread industry have the goal of maximising sales rather than profits as the motivation of firm behaviour.

This hypothesis, usually associated with Baumol, suggests that firms increase sales beyond the point where the marginal additions to total revenue of a unit sold is equal to the resultant addition to total costs. Any conclusion must inevitably be very tentative. The problem is one of presenting solid factual evidence on such matters as the behaviour of firms. It would seem that sales maximisation is also not a completely satisfactory hypothesis of market behaviour of firms in the bread industry. The basic reason for its inapplicability, according to trade contacts, is the low profitability of the industry. The low profit per unit of sales on average $\frac{1}{3}$ d per loaf at present - restricts the ability of firms to expand sales with only a minimal concern for the marginal costs incurred.

The method of price calculation of firms in the industry since 1959 is very difficult to establish. It would seem however, to be the addition of a fixed rate of profit to costs of production and distribution.

11. Sales Promotion Policy :

Market conduct includes not only the decisions by firms on selling prices and retail margins, but also those related to sales promotion.

The amount spent on sales promotion by firms in an industry could, in theory, be determined by all acting in complete agreement. Firms could undertake joint advertising campaigns with the aim of raising total demand for the product in question.

Promotional expenditure could also be the summation of what each firm individually decided to spend. The principle here would be for a firm to employ a sales promotion policy in an attempt to raise its sales at the expense of its rivals through competitive advertising.

(47) COLBOURNE, H., Managing Director of Spillers' United Bakeries, in The Observer, 8th January, 1968, also KINCH, A., Director of Federation of Wholesale and Multiple Bakers, in "Flour Power", The Grocer, 28th October, 1967, p.82.

The oligopolistic interdependence of the major firms in the bread industry has contributed to a situation embracing an element of both these contrasting principles concerning their sales promotion policy.

An attempt is made to increase total demand for bread through the medium of the Flour Advisory Bureau. The Bureau is financed by the integrated flour-bread organisations in their capacity as millers. They contribute to the National Association of British and Irish Millers, the major trade association of the flour milling industry and which created the Bureau.

The Flour Advisory Bureau was formed after decontrol of the milling industry in 1955 to promote the consumption of flour and flour products, and since 70 per cent of flour is used for making bread, the subject of its promotional campaigns has mainly been bread. The Bureau believes that its expenditure of between £ $\frac{1}{4}$ and £ $\frac{1}{2}$ m. a year on its promotion campaigns has prevented an even faster fall in flour consumption per head from taking place. Charts 1 and 2 in Chapter 2 might seem to confirm this hypothesis, although there is no means of isolating the effect of this one influence on flour consumption by which to substantiate the Bureau's claim.

The Flour Advisory Bureau uses press and poster advertising, produces leaflets, books, films and other publications, operates a recipe and nutrition advisory service, and organises conferences and educational projects.

The Bureau promotes flour and bread on a non-brand basis. (48) Members of the bread industry however do not appear to set the value of all-industry promotion very high. They feel the impact of the advertising message is lessened by the absence of any link with a particular product name. The Flour Advisory Bureau used the medium of television when it was formed in 1955, but the support from the milling industry does not now permit such advertising.

The sum spent by the Flour Advisory Bureau is considerably exceeded by the total spent by individual firms aimed at gaining custom at the expense of rivals through competitive advertising.

As the largest subsector of the Census of Production "Food, Drink and Tobacco" group, the absolute sum spent on sales promotion by firms in the bread industry has always been large by comparison with other trades within that group. When expressed as a percentage of sales, however, the total expenditure on advertising has been comparatively small.

Kaldor and Silverman attempted to measure the importance of advertising in a number of industries in relation to sales using the 1935 Census of Production. They estimated the expenditure by bakery firms on advertising as £1.1 million and expenditure on bread in 1935 as £55.7 million. Expenditure on advertising was thus equivalent to two per cent of sales revenue. Other smaller trades in the Food group spent much less in absolute terms, but advertising expenditure formed a higher proportion of their sales : for 32 food trades this proportion was 2.9 per cent. (49)

(48) It is of interest to note that there is also a similar industry advertising campaign supported by firms in the brewing industry. Both these industries face a falling demand for their standard product, wrapped sliced bread and beer respectively.

(49) KALDOR, N. and SILVERMAN, R., A Statistical Analysis of Advertising Expenditure and of the Revenue of the Press, Nat. Instit.Soc.Res., Econ. and Soc. Study No.8, 1948, Cambridge Univ.Press, pp.134,144,150.

Advertising expenditure on bread was negligible during the war and minimal in the period of price control. It has increased in absolute terms concomitant with the concentration of bread production into fewer firms and the increasing significance of nationally distributed brands. In 1955 the industry spent £238,000 on advertising and a large part of that was by Hovis Limited. (50) By 1968 total expenditure had risen to £2,500,000. Television advertising has been the predominant medium, and in 1968 accounted for over 90% of total advertising expenditure. Throughout this period the bulk of advertising has been for the standard loaf of each of the major firms. The C.W.S. and co-operative societies have, however, always spent much less than the three non-co-operative major firms, on account of a high proportion of co-operative bread being either home delivered or sold in retail society shops. Other than these groups, Cavenham Foods, the manufacturers of "Procea", "Slimcea" and "Nutrex", spends the largest sum on advertising. Contacts in the leading baking firms stated that their promotional expenditure is primarily undertaken to maintain their bargaining position with retailers, especially the food chains. Furthermore by the continued reminders to consumers of existing known brand names, brand advertising is designed to dissuade food chains from integrating into baking. There is little faith placed in competitive advertising as a means of increasing sales. A.B.F. indeed claim that sales of "Sunblest" bread did not fall in the period 1965-67 even though there was no national advertising.

111. Product Policy :

Product policy includes the design and quality of the product to be offered, the extent and frequency of variations of the product over time, size of product and package design.

The section in Chapter 2 on the extent of product differentiation has already discussed many aspects of product policy in the bread industry, and only a few additional observations are made here. The latitude of baking firms in respect of product policy is somewhat limited by the perishable nature of bread. Whereas changes in design are a feature of many consumer durable goods, such as motor cars and household appliances, the nature of bread production - daily production of a small, well-known and old established commodity - sets a limit to the opportunities for very elaborate changes in the product. Essentially product policy tends to be one of widening the range of bread produced rather than making changes in size or design or quality of standard bread.

In this respect the policies of the groups have been imitative. Since the mid-1950's they have tended to introduce fancy and speciality bread in addition to standard loaves almost simultaneously.

More recently all except the Co-operative Wholesale Society have introduced dietary loaves. Spillers introduced the "Cambridge Formula Dietary Loaf" in 1966 and were followed by J. Lyons "Slim-Vita" in May 1967 and "Top Diet" from Associated British Foods in July 1967.

(50) Economist Intelligence Unit, Retail Business No. 93, "Bread", November 1965, p.34.

IV. Predatory Tactics :

The definition of "the acts, practices and policies" of sellers, in the terminology of Bain, also includes predatory tactics employed by established sellers aimed at gaining advantage over competitors, or discouraging and preventing the entry of new competitors to the market.

Predatory tactics include selective price discrimination, dominant control of raw materials or outlets, bribes and other financial inducements in order to weaken competitors.

Selective price discrimination by a large firm cutting its prices in a particular area in order to weaken a smaller firm located in that area was practised in the bread industry at the time of extensive structural changes in the middle of the last decade. One of "the Big Four" used this tactic to reduce the market share of independent master bakers. It tended to establish a number of owned bread and flour confectionery outlets which deliberately sold at low prices, thereby forcing a number of independent bakers to merge with the firm concerned.

There is no dominant control by a few firms of raw materials or market outlet in the baking industry such as would lead to firms which have not integrated into retailing or flourmilling being subject to any financial disadvantages. As Chapter 2 has shown, non-owned retail outlets are more important than the baking firms' own tied outlets. Firms without their own retail shops are thus not dependent on other baking firms which have tied outlets, and possibly disadvantaged thereby. There is a sufficiently large number of independent flour milling firms for bakers not to be subject to a price squeeze by the integrated flour-milling-baking firms.

One trade source claimed that he knew of at least one instance of the bribery of a supermarket manager, but implied this derived from an agreement between the van salesman and the manager in question. In this instance, the driver-salesman in effect shared his commission with the retailer. The author knows of no instances where such tactics are promoted or even condoned by the management of baking firms.

V. Firm Diversification :

Discussion of the market conduct of the major bread firms must also include the extensive diversification of their interests which has been pursued in recent years.

The compelling force behind such policy is the declining demand for bread described in Chapter 2. There is as yet no sign that the decline in the volume of bread consumed will slow down in the near future. In this situation the leading baking firms have sought to diversify their interests. Although the importance of particular activities varies between them, there has been a general pattern to this diversification policy.

Diversification has followed four paths. There has been firstly diversification into other flour-using products such as cakes, starch reduced rolls, rusks, biscuits and puddings, where the technology of manufacture is akin to that of bread. Second has been the acquisition

of firms manufacturing and distributing other foods. Thirdly the major bread producers have taken interests in firms producing non-food items. Finally they have increased the importance of subsidiaries trading outside the United Kingdom.

Thus the main interests of Ranks Hovis McDougall are flour and the compounding of animal feedingstuffs, as well as bread-making. Its subsidiary, Dairy Produce Packers Limited, is one of the largest blenders and packers of butter. Stewart and Arnold Limited is one of the leading makers of chocolate couverture. Locomotors Limited is one of the most important coach builders in the United Kingdom. The organisation also includes firms which sell cars and commercial vehicles and operate service stations. The Report of Ranks Hovis McDougall for 1964 stated that the majority of the 339 active subsidiaries within the organisation had been acquired in the previous ten years. Following the merger with Hovis McDougall Limited the firm felt it necessary to reorganise its company structure. (51) There were, on 2nd September, 1967, 342 active subsidiaries in the United Kingdom, all but 11 of which were wholly owned, 15 subsidiaries trading in Ireland and nine trading abroad. (52) The organisation now classifies its interests into four major divisions, as shown below

<u>Activity</u>	<u>Number of Subsidiaries</u>
Flour milling	20
Agricultural	87
General products	55
Bakery	157

Appendix 1, Table A, reveals the extensive interests of the organisations.

Spillers stated in its report for the year 1962 that the group included 15 flour mills, 11 feed mills, 12 biscuit and rusk factories, 2 canning factories and 10 other plants Besides the 54 bakeries. Flour milling was still the largest single activity although contributing less than half of total turnover. (53)

Associated British Foods is a large food organisation with interests in the manufacturing, milling and wholesaling and retailing of food products. It forms part of the extensive interests controlled by Garfield Weston. (54) On 1st April, 1967 the firm operated 88 mills, 148 bakeries and 84 other factories. (55) In the United Kingdom its interests were as follows

<u>Division</u>	<u>Number of Plants</u>
Biscuits	9
Milling	39
Wholesale grocery, manufacturing and processing	46 plants and 38 warehouses
Bakery	76

(51) Report for year to 29th August, 1964, p.10.

(52) Report for year to 2nd September, 1967, pp.20-22

(53) Report for year ending 31st January, 1962

(54) See The Economist, 7th May, 1966, pp.601-2 and The Times, 16th June, 1967.

(55) Report for year ended 1st April, 1967, p.20.

The Co-operative Wholesale Society is the biggest co-operative organisation in the world with a turnover of £500 million.(56) The very nature of its organisation implies a much wider field of interests than any of the three private enterprise firms. Thus bread is of less significance in the total sales of the Co-operative Wholesale Society than in the case of these three firms.

TABLE 15. APPROXIMATE IMPORTANCE OF BREAD TO THE FOUR MAJOR BAKERY FIRMS - 1966

	Total turnover	Estimated bread sales	Bread as a percentage of total
	(£m)	(£m)	%
Ranks Hovis-McDougall Limited	302	72	24
Associated British Foods Limited	299	72	24
Spillers Limited	143	36	25
Co-operative Wholesale Society Ltd.	490	19	4

- NOTES: 1. Figures for bread turnover are estimated on the basis of market shares in 1966 when according to estimates by the Economist Intelligence Unit, based on the National Food Survey, expenditure at retail by households was £301 m., Retail Business No.117, November, 1967, p.38.
2. Figures for total turnover are taken from company reports covering the whole or major part of 1966, for the first three firms. In the case of the Co-operative Wholesale Society Limited, the total turnover figure is derived from The Financial Times, 27th May, 1967. The market share of the C.W.S. as distinct from the retail co-operatives is based on a private communication.

These four firms account for nearly three quarters of sales of bread in the United Kingdom. But with their diverse interests bread is not a major part of turnover or source of profits. The actual contribution of bread to these firms sales and profits is not isolated in their annual reports and accounts. In the case of the Co-operative Wholesale Society the problem of determining the importance of any one product is made more difficult by the fact that the organisation does not publish its accounts.

A rough estimate of the importance of bread in relation to the total sales of the four major firms is made in Table 15. According to a study by the stockbroking firm, Panmure Gordon & Co., the U.K. bakery and milling division of Associated British Foods contributed about 35 per cent of the group's total profits in 1968-69. This compared with a figure of between 80 and 90 per cent in 1962. Another stockbroking firm, Hoare & Co., estimated the bakery interests of Ranks Hovis McDougall as forming 40 per cent of total sales of the firm at the present time.

It seems likely that Spillers, Ranks and Associated British Foods will increase their interests in other food industries. The acquisition by Spillers in August 1967 of Tyne Brand Products, manufacturers of meat pastes and products, and of the Meade-Lonsdale Group, a leading meat importing, trading and slaughtering concern, February 1969, is typical of the course of diversification which can be expected to continue in the future.

(56) The Financial Times, 27th May, 1967.

Ranks Hovis-McDougall has recently opened a research station, the Lord Rank Research Centre, at High Wycombe "to improve the quality and nutritional value of existing products, to devise new products, and to discover new methods of growing and manufacturing foods for the future." (57) Of more immediate interest has been its acquisition of Cerebos in July 1968. It reflects the increasing interest of Ranks Hovis-McDougall and other food groups in firms selling well known branded products at a time of the growing importance of multiple retail chains. The latter like to stock fast selling nationally advertised items, and for the major food firms acquisition of well established products not only helps to maintain their bargaining strength against retail chains, but satisfies the wish to diversify in itself as well as permitting cross-fertilization of scientific expertise to effect the sort of aims stated above for the Ranks Research Station. Associated British Foods can be expected to continue to widen its food interests both in the United Kingdom, and overseas. Activities abroad are already the source of 30 per cent of its profits. (58) There are some indications that in the United Kingdom it will develop its catering activity. A number of its retail bakery goods shops are to contain snack bars to serve refreshments and quick meals. All these firms can use their expertise and knowledge of the food manufacturing and distribution sector by extending their interest in these food trades.

(57) Report for year ending 2nd September, 1967, p.19.

(58) The Financial Times, 5th October, 1967.

CHAPTER 4

MARKET PERFORMANCE OF THE BREAD INDUSTRY

Market performance is the measure of how well the market activity of enterprises contributes to the enhancement of general material and social welfare. The market structures and conduct patterns of industries are significant only to the extent that they are systematically associated with market performance. However, full appraisal of the market performance of industries is difficult because performance is intrinsically multi-dimensional.

Sosnick has put forward 12 dimensions by which to evaluate the market performance of industries. They are summarised in Chapter 1 and are the basis of the present appraisal of the bread industry.

The conceptual weaknesses and inadequacies of the normative criteria for evaluating market performance will become apparent in discussion of the dimensions suggested by Sosnick.

1. Production Efficiency :

A dominant aspect of the performance of any industry is its relative efficiency in producing goods, such efficiency being measured by how closely the firms in the industry approximate the lowest attainable costs for the outputs they produce. Production efficiency is primarily reflected in four things : the scale of plants in the industry relative to the scales which would permit lowest unit costs; the extent to which optimum technologies are employed; the rate of utilisation of existing plant capacity; and the degree of vertical integration of firms relative to the cost-minimising degree of integration. These four aspects of productive efficiency are examined in turn with reference to the bread industry.

A. Economies of scale :

The relative importance of economies of large scale plants can be measured by determining the percentage of total output that would be supplied by one plant of minimum optimal scale. It was concluded in Chapter 2 that economies of scale, in terms of the contribution of a minimum optimal plant to national output, are relatively insignificant. It is the opinion of the industry that the 12 sacks of flour converted per hour plant achieves minimum average production costs per unit. Average production costs per unit are thereafter constant.

Few bakeries, however, have plants of that size. Trade estimates of the number of such plants in the industry ranged between 10 per cent and 15 per cent of the total number of plants in bread making. The most common sized plant in the industry has an oven capacity of six sacks per hour. The survey of 224 plant bakeries carried out for the Prices and Incomes Board showed that plants with capacities in the range of five to eight sacks per hour accounted for 53 per cent of all plants. Those with capacities between eight and eleven sacks per hour accounted for a further 23 per cent of the total. There were only eight per cent of plants of size eleven sacks per hour or greater. (1).

(1) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para. 21, p.7.

The major firms are currently building new bakeries of the size capable of achieving minimum costs per unit. The Prices and Incomes Board noted that one equipment manufacturer had received no orders between 1962 and 1966 for six sack plants, all orders being for nine and twelve sack plants. Ten years ago he had received ten orders for six sack plants for every order for larger size plants.(2) The annual reports of the major baking firms in recent years have emphasised the large sums spent on modernising and rebuilding bakeries. However, the total sum spent by the industry, between £15 million and £20 million annually, has clearly been inadequate to date to ensure that the bulk of bread is produced in least cost plants.

The major firms vary considerably in the average size of their bakery plants. The average size of plants owned by Spillers is greater than that of the other three major firms, reflecting its acquisition policy after 1953. It tended, much more than Allied Bakeries or Ranks, to acquire existing large-sized bakeries. Ranks purchased many more bakeries and of a smaller size in the rush for outlets after 1953, with the result that its average size of plant is about half that of Spillers. The average size of bakeries owned by the C.W.S. and Associated British Foods is also lower than that of Spillers. It is important to emphasize the connection between the competition among milling firms and Allied Bakeries in the mid-1950s for bakeries and the industry's present market performance. It has meant that the location of plants is considerably less than optimum, and scarce capital which could have been used to build bakeries such as would permit low cost production was in fact used to acquire in a haphazard manner sub-optimum sized plants. Millers obtained immediately captive markets for their flour but saddled themselves in the longer term with units that formed in the aggregate neither a coherent group to organise nor represented the most efficient combination of plant from the point of size, siting, and technical methods. Once acquired it has inevitably meant that change to a more optimum pattern of production has been slow. The industry's performance in respect of production efficiency would almost certainly be better had the millers integrated into bread baking by building bakeries and not acquiring existing ones. At the time, however, opting out of the rush for bakeries seemed too much like putting one's flour mills in jeopardy.

In February 1968 plant bakers were permitted to raise prices by 1½d. The industry assured the Ministry of Agriculture that the revenue from part of this price increase would be devoted to investment in optimum sized bakeries.

The improvement in efficiency that has resulted from the increased injection of capital into the industry is difficult to estimate from the outside and even firms are probably unable to quantify the economic benefits attributable to investment in new plant. The reason being that such capital programmes are of a long term nature and isolation of the immediate effect on unit production costs is not readily established.

(2) Ibid, p.24.

B. Mechanisation of production :

Costs per unit of output in any industry are considerably influenced by the extent to which firms adopt new technologies of production. In bread making significant savings in manpower are achieved with larger, more mechanised plants. The average manning per shift on plants in the eight to eleven sacks an hour range, in the Prices and Incomes Board Survey, was 10.9 men on hand operated plants but 6.3 men on automatic plants. (3) Relatively few extra men are required on larger plants.

TABLE 16	MANPOWER PRODUCTIVITY IN VARIOUS SIZES OF PLANT
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
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84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Plant Size (sacks per hour)	Average Productivity (sacks per man-hour)
Under 5	0.360
5 - under 8	0.536
8 - under 11	0.797
11 - and over	1.001

SOURCES : National Prices and Incomes Board, Report No. 17, Wages in the Bakery Industry, Appendix B, p.26.

Manpower productivity increases strikingly in the larger plants, as is shown in Table 16.

The economies obtained from large sized, automatic plants can be appreciated from the diagram of a 15 sacks per hour plant, shown in Chart IV. This plant is the current design of one of the major bread equipment manufacturers in the United Kingdom. Six men are required to man this plant; one to operate the dough mixer, either of the batch (stage 1) or continuous mix (1A) type, and one man to oversee the operation of the moulders (stage 3). Thereafter the whole manufacturing process is undertaken completely automatically. Two men are required to make changes in tins for the making of different varieties of bread, and two men to stack bread once it has been sliced and wrapped.

However, four further men per shift are necessary where bread is hand loaded into the oven and manually unloaded from the oven. Two men are required at stage 6 to load bread into the oven, and two more to remove bread from the oven and return both tin and lid to the start of the production line (stages 8,9 and 10).

The Prices and Incomes Board noted that

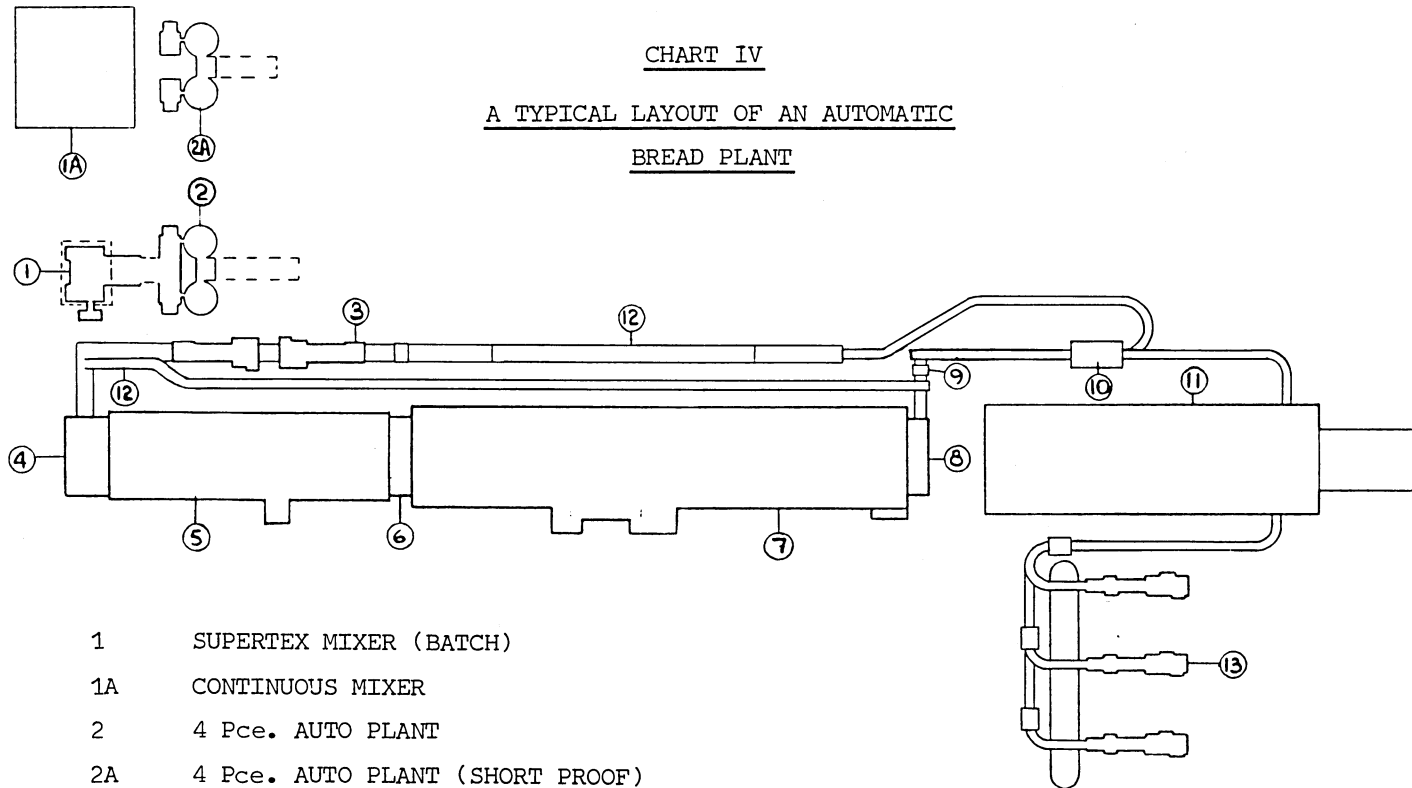
"the output of the smaller bakeries acquired is being concentrated in larger, often newer plants. The completion of (this) second phase is the justification for the first phase (of acquisition of small bakeries)." (4)

(3) National Prices and Incomes Board, op. cit., para. 21, p.7.

(4) National Prices and Incomes Board, Report No.3. Prices of Bread and Flour, para, 36, p.10.

CHART IV

A TYPICAL LAYOUT OF AN AUTOMATIC BREAD PLANT



1 SUPERTEX MIXER (BATCH)

1A CONTINUOUS MIXER

2 4 Pce. AUTO PLANT

2A 4 Pce. AUTO PLANT (SHORT PROOF)

3 MOULDERS

4 GROUPER/PROVER FEED

5 PROVER

6 PROVER/OVEN TRANSFER

7 OVEN

8 OVEN UNLOADER

9 DELIDDER

10 DETINNER

11 COOLER

12 RETURN TIN & LID CONVEYORS

13 SLICING & WRAPPING AREA

The significance of the remaining large number of small sub-optimum size plants of the major firms is that they are the segment of the baking industry on which profitability of bread manufacture is low (see Section IV.) It is these plants, where manning requirements are high relatively to large automatic plants, which on account of rising wage rates, have been an important element in motivating continual increases of bread prices since 1960.

C. Utilisation of plant capacity :

There is excess capacity in the bread industry of both a short and long term kind.

Consumers' shopping habits, in conjunction with the perishability of bread, currently necessitates a weekly cycle of bread production. Thus plant capacity adequate to supply the peak demand for bread at weekends, results in various lower levels of capacity utilisation during the rest of the week. This type of excess capacity or variation in daily output rates within the week, is not generally subject to control by the baking industry in the short term. The variation in production over the week is shown below, with production each day, expressed as a percentage of the total:-

Sunday	16	Wednesday	14
Monday	15	Thursday	17
Tuesday	14	Friday	24

SOURCE : National Prices and Incomes Board,
Report No.9, Wages in the Bakery
Industry, p.5.

This variation in output means higher costs per unit are incurred in production on days early in the week. A survey for the National Prices and Incomes Board related man hours employed on production on each day of the week, to actual production achieved. Production efficiency by this measure was generally highest on a Thursday or Friday when total production was higher, runs were more continuous, and a higher proportion of output consisted of standard loaves. (5) In the long term, the production of a loaf with longer keeping qualities would tend to even out variations in the demand for bread. Significant production and distribution cost savings could be envisaged.

There is also excess capacity in the bread industry in the long term. The fact that the industry is "overplanted" is reflected in the difference between optimum working hours, having allowed for variations in weekly demand, and actual hours worked. The Federation of Wholesale and Multiple Bakers in evidence to the Prices and Incomes Board, stated that the optimum operating hours for a bakery were between 100 and 110 hours per week. The Actual average number of hours worked by firms in the sample studied by the Prices and Incomes Board was 95.5 hours per week. (6) Plant utilisation was thus about 90 per cent of optimum capacity. Counsel for the Federation of Wholesale and Multiple Bakers stated in the Restrictive Practices Court that between 91 and 97 per cent of available capacity was used in 1959 (7).

(5) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para. 31, p.10.

(6) Ibid, Appendix B, p.25.

(7) See Law Report I.R.P., p.428

This degree of surplus capacity, while not as large as in some other industries, reflects the inadequate rate of withdrawal of old plant from the industry as technical advances in production have occurred. For example the introduction of oil-fired "Turboradiant" ovens where bread passes straight through an oven without manual loading or unloading, has not led to the elimination of older "uniflow" ovens where operations are performed by hand. One of the bases for the prevalence of excess capacity has been the nature of bakery equipment, which is characterised by its durability. Since bread prices have increased steadily in recent years this old equipment has been kept working as its operation is just marginally profitable. One trade source stated there was in fact excess capacity of the order of 15 per cent of total capacity. Optimum plant use was 132 hours per week, (8) whereas the firm in question was operating for just 110 hours per week. According to this source the "overplanted nature" of the industry has contributed to a "nervous price policy" by the major firms. However, price adjustments in recent years have not been so delayed as to induce the required rate of withdrawal of old plant.

D. Vertical integration :

Forward integration by the flour millers has been promoted by the desire to safeguard their outlets in a period of falling flour consumption per head. It has not, except incidentally, been motivated by the desire to link the processes of manufacturing within one firm to effect cost savings. The vertical integration of flour milling and bread manufacture, while not actually uneconomic, does not appear to be justified on the basis of any cost savings in bread manufacture. Nonetheless it may well be that vertical integration has led to economies in flour milling, for example, in the distribution of flour to bakeries. There has been no attempt in this study to determine the significance of such economies for the flour milling trade.

11. Technological Progressiveness :

A. Automation of processes :

The technology of baking has in general changed slowly over time and this too has had the effect of retaining old equipment within the industry. Thus the average age of the most common size of plant, five to eight sacks per hour, is 14 years. (9) There have been minor technical advances, however, permitting greater synchronisation of bread making processes. Judged in that light, the bread industry has not exploited all the existing opportunities for innovation that reduce production costs per unit. This is shown by the extent of mechanisation of bread making processes.

The study for the Prices and Incomes Board showed that, although in 65 per cent of plants dough was mechanically passed from moulder to divider (stage 3 in Chart IV), only 40 per cent handled flour in bulk to mixer (stage 1). Only in 23 per cent of the 224 plants studied was the transfer from prover to oven (stage 6) automatic and only in 13 per cent was bread mechanically "de-lidded" (stage 9).

(8) The 6 day operation of the 12 sack plant working 22 hours a day.

(9) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para.21, p.7.

In only five per cent of plants was bread mechanically de-timed (stage 10).(10)

B. The Chorleywood Process :

The plant baking section of the industry can, however, be credited with the quick adoption of the Chorleywood bread process.(11) Within six years of the publication of the process in 1961, three quarters of the bread made in plant bakeries uses the Chorleywood bread process. The process replaces the conventional three hour period of bulk fermentation with a short period of very intensive mechanical working of the dough. The developed dough is then processed in the same way as dough made by conventional methods. It requires the use of special mixing machines, but leads to savings in raw material costs. The amount of bread made from a given amount of flour is increased by about four per cent due to reduction in fermentation losses. The process permits the use of somewhat weaker flours without loss of bread quality, so that the proportion of cheaper English wheat in the grist can be increased and imports reduced. Space is saved and the capital cost in new bakeries is somewhat reduced.

The rapid adoption of the process since 1961 has led to cost savings of the order of £1 m. per year. The value of cost savings will further increase as the process is more rapidly adopted by master bakers. The capital investment in the mixers required has tended to cause adoption by master bakers to be much less rapid than by plant bakers.

C. Research expenditure :

The evaluation of technological progressiveness of the bread industry must also attempt to assess the effort made to discover new techniques which might lead in the future to reduced costs. The optimum state of technological progressiveness is, of course, unknown, and the potential rate of discovery against which the actual might be measured cannot in any way be determined a priori. Nevertheless, one indication of progressiveness is the amount spent by an industry on research and development.

The level of research expenditure is a rather crude norm, since the amount to be spent in any industry must be decided by subjective judgement by firms according to their particular market situations. Some comparisons can however be made.

The Food and Drink trades spend on average about 1.9 per cent on all industry research and development expenditure in the United Kingdom. The bread industry is the largest trade within that category, but spends only about half a million pounds annually on research. This represents less than 0.1 per cent of its turnover. (12) Of this sum, about one quarter is spent by the British Baking Industries Research Association at Chorleywood. The Prices and Incomes Board stated that

"the proportion of turnover spent on research is thus low." (13)

(10) Ibid Appendix B, p.26.

(11) See AXFORD, D.W.E., CHAMBERLAIN, N., COLLINS, T.H. and ELTON, G.A.H., "The Chorleywood Process", Cereal Science To-day, Vol.8, No.8, 1963.

(12) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para. 25, p.8.

(13) Ibid, para.25, p.8.

The major firms do not appear to have placed great emphasis on research into extending the shelf life of bread. The trade concedes, however, that a loaf with better keeping qualities could result in large cost savings through a more even pattern of production. Bread could be baked in considerably fewer plants. There would also be savings in distribution costs. Fewer deliveries would be necessary than at present, so that roundsmen could deal with more customers by leaving more bread at each delivery.

The Ministry of Technology has decided to make a specific grant for the purpose of research aimed at extending the shelf life of bread. In 1967 the government began an annual contribution to the Association, and will provide up to £150,000 a year for the next five years. But this sum depends on the contribution made to the Association by the industry itself and as yet this is such that the maximum government grant cannot be claimed.

The Association needs stronger financial support from the industry and has itself stated that

"a much greater investment will be necessary if a commercially-practicable solution to the stalling problem is required in the near future." (14)

The British Baking Industries Research Association has explored the possibilities of storing bread through refrigeration. At the Sixth Food Processing, Packaging and Machinery Exhibition held in London in October 1968, bread baked three months previously was displayed by the British Oxygen Company. The latter, who have been working in conjunction with the B.B.I.R.A., claims to have developed a process to freeze baked food which when reconstituted is indistinguishable from fresh-baked bread.

It may be doubted whether freezing is a real solution to evening out the fluctuations in bread production and help to reduce distribution costs. Storage space required and the cost of refrigeration equipment make one sceptical of progress on this front. Advance would seem more dependent on the discovery of a chemical process which would permit bread to remain in a fresh condition without the need for such extra capital cost.

The baking firms do not seem optimistic of future progress, however, on this matter, and also point out that consumers look for freshness as a prime requirement in buying bread. In other words consumer acceptability of bread baked days or even months prior to purchase is questioned. Certainly a major element of the "message" conveyed by the television advertisement is the freshness of the particular brand of bread being depicted and it would require a complete change in the nature of advertising bread. However one does not need to be too much of a cynic to realise that a loaf with longer keeping qualities would reduce the demand for bread if only to the extent that bread would not be thrown away on account of becoming stale. Given falling demand for bread already baking firms can hardly be expected to be enthusiastic to encourage the trend!

(14) British Baking Industries Research Association, Report for 1965-66, p.3.

The decision of Associated British Foods to identify bread baked each day with a coloured wrapper in June 1969 makes discussion of the shelf life of bread particularly apt. To the extent that the change prevents the consumer being passed off with stale bread it is to be welcomed. (15) It is to be wondered whether it will at the same time delay efforts to reduce costs of bread production and distribution. Consumers like fresh bread but also reduce their purchases when prices rise, and the move is not likely to help the containment of costs should it become widespread.

The sum contribution by the industry to the Association - £135,000 per year - can be compared with the sum spent by Ranks Hovis McDougall in promoting its brand "Mothers Pride" on its introduction in the London area in 1966. It spent £325,000 on television advertisements alone. (16)

Fellner has suggested that output per man-hour can, with certain limitations, be a measure of progressiveness. (17) Data on productivity changes is, however, very sparse. The 1958 Census of Production showed that net output per person employed in the bread and flour confectionery rose from £638 in 1954 to £820 in 1958. The increase was about the average for all manufacturing industries. (18) On this basis the performance of the baking firms in adopting new technologies compares not unfavourably with these other industries.

111. Product Suitability :

Bain has stated that

"firms should elevate quality so long as the resulting addition to buyer satisfaction outweighs the resulting addition to cost The difficulty is (that measures) not only of the costs of all product opportunities, but also of their relative satisfaction-providing power, would be required " (19)
There is a simple lack of systematic factual evidence." (20)

A norm for product suitability is in fact difficult, if not impossible to establish.

Product suitability has implications for the efficiency of production since an elaborate range of similar products can involve higher average costs through reduced lengths of production runs. There is a potential conflict in any industry between realising economies of scale and achieving capacity operation through long production runs, and the production of a variety of goods to cater for the diverse tastes of consumers.

(15) A group of public health inspectors showed how bread is passed from one shop to another for sale as new and have pressed for date stamping of bread. The Financial Times 13th August 1969.

(16) "Flour Power", The Grocer, p.84.

(17) FELLNER, W., Competition Among the Few, p.285

(18) Census of Production 1958, Summary Table 1.

(19) BAIN, J.S., Industrial Organisation, p.398

(20) Ibid, p.394.

It was the view of the Prices and Incomes Board that

"existing equipment would also be more efficiently used if there were longer production runs on fewer types of bread". (21)

They cited two of the major firms as producing 50 and 75 different types of bread, and said,

"within the competitive framework as it now is, it is for each company to judge the extent to which it is able to reduce the number of types produced." (22)

The Prices and Incomes Board recommended that there should be fewer types of bread as part of its wider aim to help reduce the costs of bread production and distribution. But the Board presented no explicit evidence in support of its proposition concerning the potential economies from a reduced range of bread which would not involve, thereby, any loss of consumer satisfaction. The opinion of the industry is that all types of bread have to be economic to justify themselves, that is the marginal revenues of additional variety of bread are positive and greater than its marginal costs. The number of types of bread from the same dough is further stated to be high so that breaks in production are claimed to be short. Trade sources deny that the large number of types of bread is made possible by cross-subsidisation of low selling lines by the standard varieties.

The stimulus to producing a wide range of fancy loaves has been that their weight is not fixed by law, as in the case of standard bread, and higher prices can be charged. The Prices and Incomes Board in its third report, referred to a study of 39 bakeries where man-hours employed on production throughout the week were compared to actual production. It noted that when total production was higher - at weekends - average costs were 15 per cent lower than at other times of the week. But only part of this cost savings came from the fewer varieties of bread produced at weekends. Also important was the length of production run ensuing from higher total production.

However, observed behaviour of the major firms seems to support the Board's case that economies can be derived from the production of fewer bread types. The firms have reduced their range of breads by pruning those of marginal profitability. It has been apparent that the production of a wide variety of fancy bread, made in an effort to lift total sales, involves shorter runs and high labour costs relative to standard bread. Thus, whereas Associated British Foods produced less than 30 types of bread in 1957, and the number rose to 60 in 1962, (23) this had dropped to about 52 in 1964. (24) Plant bakers concede that master bakers have an advantage in the production of fancy bread. The wide variety of bread baked in plants has also had a significant impact on the development of continuous dough mixing in the United Kingdom.

Few bakeries, estimated by one source as about 30, have continuous mixers installed. In part this slow adoption of continuous mixers has

(21) National Prices and Incomes Board, Report No.3, Prices of Bread and Flour, para. 39, p.11.

(22) *Ibid*, para, 39, p.11.

(23) Financial Times, 17th December, 1962.

(24) Financial Times, 14th September, 1964.

installed. In part this slow adoption of continuous mixers has resulted from the application of the quick dough making technique - the Chorleywood bread process - to existing batch dough mixing. It is, however, of limited value when plants produce a number of types of bread. Its adoption will not be more widespread until there is increased specialisation of bread product by bakery plants.

IV. Profit Rates :

The problem with this dimension of market performance is to make subjective judgement as to the appropriate level of profit in relation to risks, and the reward necessary to stimulate innovation bearing in mind the characteristics of the market in question. The level of profits to the industry is discussed in the three time periods, 1939-1956; and 1956-1959; and 1959-1968.

A. 1939-1956 :

Although during the period from 1939 to 1954 the target profit for the baking industry was 5s. 0d. per sack, plant bakers often obtained a higher profit margin than this, whereas master bakers found their profit margins were much lower. It was stated in May 1952 that average actual profits to master bakers were 2s. 10½d per sack, to plant bakers 6s. 0½d. and to co-operative bakers 9s. 9½d. Numerous bakers showed losses on bread even with the subsidy.

In 1952 the Ministry of Food disclosed that, in the master baker group, 39 per cent of those using six to twentyfive sacks weekly, 29 per cent of those using 26 to 100 sacks, and 34 per cent of those using 100 to 200 sacks showed a loss. In the plant bakery group, 15 per cent were making bread at a loss, and in the co-operative group, 30 per cent were sustaining losses. The Parliamentary Secretary to the Ministry of Food stated in the House of Commons, that in his opinion, however, there was a possibility that those who suffered losses would be more inclined to make a costings return to the Ministry. (25) A survey for England and Wales in 1951-2 disclosed that more than 10 per cent of the traders investigated showed continuous substantial losses, even after receiving subsidy, over periods up to 3½ years.

The permitted profit margin was increased from five shillings to seven shillings per sack in October 1954,

"to remunerate the additional capital employed between 1941 and 1954, to allow for greater usage of plant owing to the greater number of units produced and to allow for the reduced value of the £ sterling". (26)

In practice the permitted profit margin was 7s. 5d. per sack, on account of the extra profit deriving to bakers from the reduction in the weight of loaves in May 1946. Even this margin did not take into account other sources of profit arising from the production of "national" bread, which

(25) Hansard, 30th May, 1952, Cols. 1865-66.

(26) Stated in Judgement of Court in re Federation of Wholesale and Multiple Bakers Agreement, Law Report I.R.P., p.397.

successively rose in the years up to 1956, and which the bakers had been allowed to retain. These were the profits from wrapping and slicing, deferred rebates on flour, and cash discounts allowed by millers for prompt payment.

The accountant for the Federation of Wholesale and Multiple Bakers in evidence in the Restrictive Practices Court estimated that the average production and distribution costs of members of the Federation were lower in amount than those attributable to the other sections of the industry. Average costs of Federation members were put at 2s. 10d. lower than the average costs of the industry as a whole. The average profit from production and distribution of standard bread by Federation members was estimated in April 1956 at 16s. 10d. (27) per sack exclusive of cash discounts. This comprised

Permitted Ministry margin	7s. 5d.
Extra margin through lower costs	2s. 10d.
Profits of wrapping and slicing	5s. 0d.
Millers rebate	1s. 7d.
<hr/>	
Total profit, exclusive of cash discounts	<u>16s. 10d.</u>

B. 1956-1959

During this period the Federation of Wholesale and Multiple Bakers recommended fixed and maximum prices by reference to the operation of a price formula (described in Chapter 3) which contained a ceiling, initially 18s. 0d. and later 15s. 0d. per sack. The reduction of average production costs by $7\frac{1}{2}$ per cent in effect reduced the target profit to 12s. 0d. per sack. When cash discounts were also allowed for, the operation of the price formula ensured a total average profit margin of 13s. 5d. per sack. (28)

The Court in its judgement noted that the sample of firms costed for the purpose of price recommendations, however, showed a wide range of profits. (29) It claimed that in 1958 a considerable number of members made profits well above this average of 13s. 5d. per sack. It stated that while the prices arrived at and recommended under the formula were low as regards the high cost section of the industry, they were not low for low cost producers, and most Federation members were making good profits.

The Federation's accountant compared the average profit margin of 13s. 5d. with profit percentages on turnover earned by various categories of food companies. The latter for the years 1953-56 were as follows:

1953-54	6.2 per cent
1954-55	6.6 per cent
1955-56	5.7 per cent.

(27) Law Report I.R.P., p.398

(28) Law Report I.R.P., p.407

(29) For 1958, bakeries within the three largest groups showed a range of profit per sack as follows -

First group	Profit	20s. 2d. to loss 1d.
Second group	Profit	21s. 3d. to loss 2s. 10d.
Third group	Profit	31s. 3d. to loss 22s. 11d.
Other firms	Profit	11s. 2d. to loss 6d.

Law Report I.R.P., p.408

He agreed that a profit margin of 13s. 5d. represented approximately a 7 per cent margin on turnover. (30) Although margins, expressed as a percentage of turnover, are of limited value as a measure of profitability the Court nonetheless concluded that the bread industry earned "a materially higher percentage" (31) than comparable food trades.

The Federation's trade witness put forward what he described as a typical plant bakery, whose ratio of profit to turnover for the post-subsidy period 1956 to 1959 for standard bread only was 10.2 per cent. This can be compared with the rate of 10 per cent in 1938-39 earned by the same company, 7.1 per cent in period 1940-46 and 11.5 per cent between 1949 and 1955.

A better measure of profitability is to relate profits to capital employed in an industry. Unresolved differences of opinion appeared in the evidence in the Restrictive Practices Court between the accountant for the Federation and the accountant for the Registrar. They differed as to the most appropriate standard of comparison and to the methods of arriving at an estimate of the capital employed in the industry. These differences as to concept and method of appraisal reflect the problems of evaluating profit rates of an industry. Some of the differences in this case arose as to whether the whole of the "goodwill" of the major firms should be included in the estimate of capital employed. This "goodwill" formed part of the sum paid for the numerous master bakers acquired in the previous decade. The accountant for the Registrar concluded that profits expressed as return on capital employed lay somewhere between 16.5 per cent and 27 per cent. He compared these figures with the average profit margin of Food and Confectionery Companies which expressed as a percentage on capital employed, was 16.9 per cent. (32) In the Court's view these comparisons showed

"average profits favourable to the standard bread industry". (33)

C. 1959-1968 :

In the period since the rejection of the Federation's price agreement, the profitability of the bread industry has fallen quite sharply. A major reason for this low profitability of bread manufacture has been rising distribution costs, which are discussed in Section V.

The fear of the Federation that, in the absence of the agreement on prices and the basic retail margin individual members would be forced through competition to concede higher levels of discount to retailers has been confirmed. Although the standard retail margin is 12½ per cent the actual average margin is between 15 and 18 per cent.

The increasing rates of discount, particularly to large sized retailers have, in effect, reduced total revenue occurring to the major firms. They have increased bread prices regularly since 1960 to keep pace with the rise in costs and levels of discount (as Table 24 in Chapter 3 showed).

(30) Law Report I.R.P., p.457

(31) Ibid, p.457.

(32) Law Report I.R.P., p.458

(33) Ibid, p.459.

Bread prices have risen faster than the average for all food prices and the index of all retail prices since 1960 as Chart V shows. Profit per sack is thus definitely below the average level of 13s. 5d. returned by the operation of the Federation price formula between 1956 and 1959. The low level of profit from bread manufacture prompted the Prices and Incomes Board to recommend in its third report on the industry that

"the government.....should recognise that the ability of the baking end of the industry to contain costs in the future depends on a return to new investment sufficient to encourage the trend to larger and more automatic bakeries." (34)

The board stated that between 1960 and 1964 the average annual profit on turnover ranged between three and five per cent, and in terms of profit per loaf the bakery companies earned on average about a $\frac{1}{2}$ d. per loaf in 1964. It found that the experience of individual firms varied widely when profits were related to capital employed. On average master bakers were earning $8\frac{1}{2}$ per cent on capital employed, and the major firms $6\frac{1}{2}$ per cent in 1964, with assets at balance sheet value. (35)

While acknowledging that this return on capital employed was well below the national average, the Board in September 1965 had recommended a standstill on bread prices for six months. It considered that the plant bakers were too readily prepared to increase bread prices following the settlement of wage claims, without attempting to make more efficient use of manpower. Following the publication of the Board's report, the unions representing both production and distribution employees in the baking industry pressed their wage claims vigorously to the point of strike action in November 1965. In view of the undertaking given to the government not to increase bread prices, the major firms apparently felt unable to negotiate such wage increases. The Government in this situation referred the wage claims to the National Prices and Incomes Board.

In its interim report, the Board recommended a temporary wage settlement and an increase in the price of the standard loaf of 1d. The major firms in their annual reports at this time complained of the even lower profitability of bread manufacture caused by this standstill on bread prices until January 1966. J. Lyons stated that the price freeze had meant the loss of £200,000 profit. (36)

In June 1966 an increase in the price of flour was permitted. The bread industry accordingly wished to raise bread prices, but were unable to do so until January 1967, when a further flour price increase was permitted. This price increase was delayed because of the statutory price standstill imposed by the government. J. Lyons estimated that it had lost some £65,000 profit on bread as a result of the ceiling on prices being enforced for six months. (37)

The recommendation of the Prices and Incomes Board in its third report of June 1966 on the need for a higher return on capital investment in baking was subsequently discussed by the industry with the Ministry of Agriculture. It was agreed that the Board should quantify its recommendation,

(34) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para, 69, p.20.

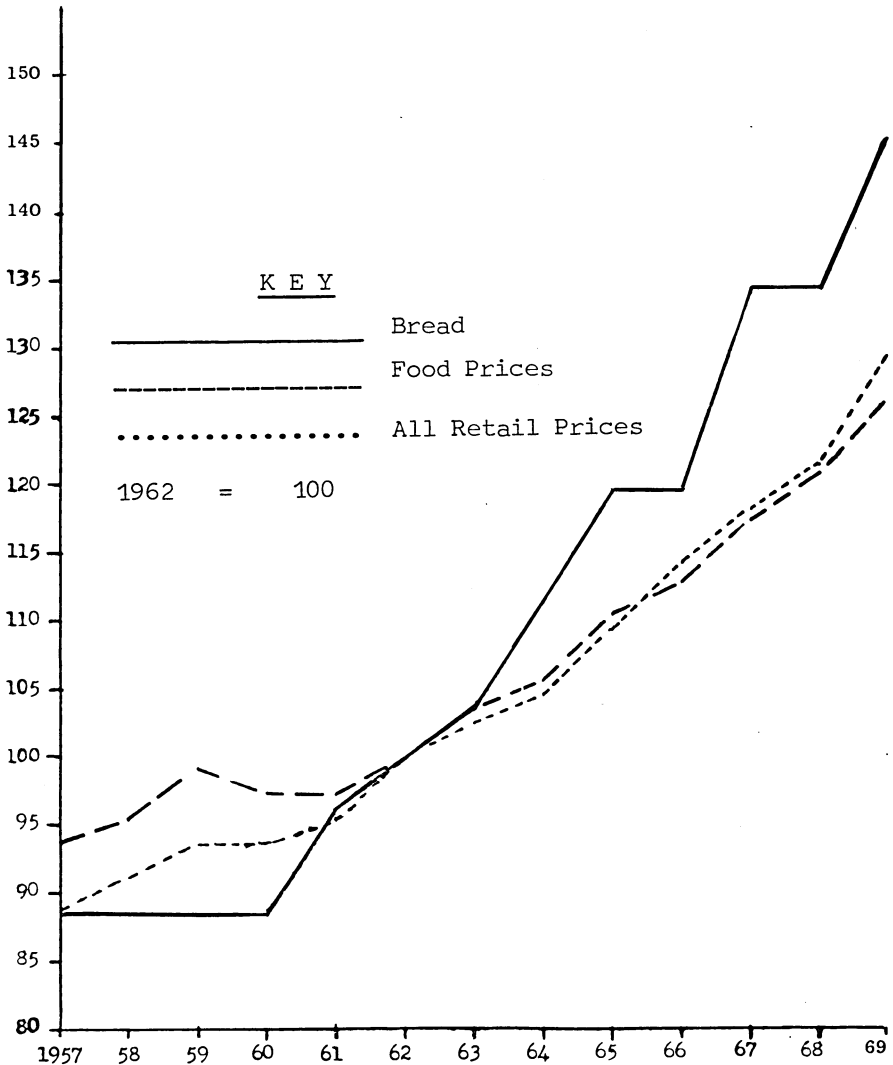
(35) National Prices and Incomes Board, Report No.3. Prices of Bread and Flour, para. 32, p.9.

(36) Report for year to 31st March, 1966, p.15.

(37) Report for year to 31st March, 1967, p.16.

CHART V

INDICES FOR BREAD, ALL FOOD AND ALL RETAIL
PRICES : 1957-69



SOURCE: All Food and All Retail Prices from Index of Retail Prices
Annual Abstract of Statistics, Index for Bread based on
Sliced Plant Baked Bread.

NOTE: The weighting of All Food in the All Retail Price Index was
fixed until 1962.

with the help of the industry. The Board agreed to take on the exercise as an informal extension of its Report No.17, and produced its findings in October 1967.

The Board found that the return on capital, in the industry with assets valued at replacement cost averaged 4.5 per cent. This compared with a return for all industries of 11.4 per cent. The return on newer capital, however, was higher than the average for the industry. The return on recently installed nine sack plants varied between 6.5 and 8.5 per cent on capital employed. The Board recommended a price increase of $\frac{1}{4}$ d. per loaf to bring the return on such new plant up to the national average rate.

The government agreed to a price increase of standard bread in February 1968 of $1\frac{1}{4}$ d. which included the $\frac{1}{4}$ d. recommended by the Board. The plant bakers assured the Minister of Agriculture that the revenue from this part of the price increase would in fact be devoted to an accelerated programme of capital investment. They further put forward evidence on the rationalisation of their distribution system which had taken place and was in hand. A further $\frac{1}{4}$ d was permitted to cover increased costs, and the third part of the $1\frac{1}{4}$ d price increase was to allow for the increased cost of flour as a result of devaluation. The National Prices and Incomes Board had assessed the increase in flour costs resulting from devaluation to bakers in a special report. (38)

In March 1968 female bakery workers were given a wage increase of just over 7% being approved by the Government in terms of its incomes policy on the grounds that they constituted low paid employees. In December 1968 male bakery workers received their first wage increase since the implementation of the Prices and Incomes Board's third report in January 1967. Because of this award - one of 5.5% - , extra fuel and vehicle costs and rises in other costs the baking firms again sought to increase bread prices. These were agreed to by the government but at the same time to prepare for the demonetisation of the halfpenny on August 1st, it permitted an increase of 1d on large standard loaves while the price of a small loaf was to be reduced by $\frac{1}{4}$ d. These price changes occurred on February 3rd, 1969.

The Minister of Agriculture stated in the House of Commons that the baking firms had given the Government satisfactory assurances about the progress being made towards modernisation in the industry with the objective of achieving greater efficiency in the longer term in bread production, having regard to the special increase in bread prices granted for this purpose at the time of the last price adjustment. The Ministry was satisfied that the main firms in the industry had in fact accelerated its capital investment programme as a result of the additional $\frac{1}{4}$ d per loaf capital injection in the February 1968 bread price increase. The firms have further continued the process of rationalising production and distribution and eliminated uneconomic distribution schedules and retail rounds.

(38) Flour Prices Report no.53. Cmnd. 3522, H.M.S.O. January 1968.

Government policy in recent years is thus to raise the low return on capital employed in the baking industry.

The actual size of profits obtained by each of the largest four firms is not revealed in their annual accounts. The C.W.S. Bakery Division has made an overall loss of around £1 m. in recent years. This is not the result of trading losses but of heavy depreciation charges in a period of rapid rationalisation of plant by the C.W.S. This reorganisation of the baking interests of the C.W.S. will also involve large sums for capital expenditure since that organisation has the oldest plant amongst the major firms.

V. Distribution Efficiency :

The perishable character of bread means its system of distribution is somewhat different from that of other food products.

There are physical limitations on the radius served by a bakery because bread has to be delivered in a reasonably fresh condition. The Rhys Committee stated in 1937 that 67 per cent of housewives wanted bread in a hot or new condition. Bakers have thus always had to produce bread daily. Table 28 shows the frequency of housewives purchases of bread. There is an obvious increased frequency of purchase as family size increases but, overall, more than half of housewives questioned in a recent survey said they bought bread on four or more days per week.

The result of the perishability of bread is that the length of time available for delivery is very limited. The bread industry and the daily press share the characteristic of producing an article for daily consumption, where the time factor is of crucial importance. The nature of the local environment - whether it is an urban area where traffic congestion is important or where traffic can move quickly - in association with this time factor, determines the extent of the market area of a bakery.

In built up areas traffic flow can considerably reduce the market radius of a bakery plant. Thus, although J. Lyons and Company have plants at Cadby Hall, Chessington (Surrey) and Crawley (Sussex) its market area is much smaller in the East of the Metropolitan area than in the Western part. Bakeries sited near motorways, however, have considerably expanded their area of bread distribution in recent years. J. Lyons transports bread baked at Cadby Hall to a depot at Ilkeston in Derbyshire, from where it is distributed to retail shops by wholesale vans. The greater mobility permitted by new motorways has indeed led to some specialisation of plant bakeries within the major firms. For instance, one bakery near Nottingham, belonging to one of the major firms, supplies certain types of bread sold by that firm in its shops in the London area; this bakery also receives and distributes other types of bread baked in other plants of the firm within the Metropolis.

It is with these features of bread production and distribution in mind that evaluation is made of both delivery to consumers directly and to retail shops.

A. Retail distribution :

The total costs of selling and delivery represent 27 per cent of the price of bread. These costs form the second largest item of the cost of a loaf of bread (Table 17.) This proportion has steadily increased in recent years, being 23 per cent in 1960. (39) The cost per loaf of labour associated with distribution increased between 1960 and 1964 by about 45 per cent. (40)

TABLE 17 THE COST STRUCTURE OF THE STANDARD
LOAF - 1967

	Pence	Per cent
Flour	7	40
Manufacturing costs	2½	13
Selling and delivery expenses	4½	27
Overhead costs	2½	12
Wrapping and slicing	1	5
Profit	½	3
	1s. 5½d.	100

SOURCE : Economist Intelligence Unit, Retail Business No.117, November 1967, p.42.

The Prices and Incomes Board was not the first publicly appointed body to be concerned with the rising costs of bread distribution. The Departmental Committee on the Distribution and Prices of Agricultural Produce in 1925 noted that

"by far the heaviest increase in postwar (1918-25) costs is attributable to distribution." (41)

Their suggestion that firms should make a delivery charge for bread was echoed by the Prices and Incomes Board exactly forty years later. The reasons for the lack of widespread adoption of a delivery charge by bakers were noted by the Committee. It stated,

"In industrial centres, considerable saving could be effected were the consumer willing to purchase supplies over the counter instead of requiring costly delivery service, and a slight reduction would then be possible in the price of bread fetched from the shop. Bakers, as a whole, hesitate to institute differential prices of this nature. They assert that past experience shows emphatically that once a reduction is made in the price of bread sold over the counter, the customers who demand delivery become dissatisfied and press for a similar reduction in the price of bread delivered to their doors. Bakers hold the view that the system has a disturbing effect on trade, and they are clearly too nervous of its results to do anything to facilitate its reintroduction.

(39) National Prices and Incomes Board, Report No.3., Prices of Bread and Flour, para. 27, p.7.

(40) Ibid, para. 28, p.7.

(41) Ministry of Agriculture, Departmental Committee on Distribution and Prices of Agricultural Produce, Interim Report No.4. para.145, p.59.

Even in those cases where differential prices are charged for delivery and for shop trade, the majority of consumers, it appears, show no anxiety to take advantage of the cheaper rates, and prefer to pay the additional $\frac{1}{4}$ d. per loaf charged for delivery services. In the circumstances, and in the absence of any active desire on the part of the consuming public to reduce unnecessary costs by themselves assisting in the process of distribution, there appears little hope of a saving in this direction." (42)

Bakers were free to make a delivery charge during the war, and authorised to charge higher prices for bread delivered to customers in certain sparsely populated areas from September 1947 till June 1951. The charge, however, was not compulsory.

Prior to the report of the Prices and Incomes Board in September 1965, a charge was often made in rural areas, such as Central Wales and parts of East Anglia. The more widespread adoption of making a delivery charge since the Board's report has been due to the realisation that trade would not be lost to competitors if all firms made a delivery charge. The charge made at present is $\frac{1}{4}$ d. or 1d. per loaf. The labour and vehicle cost of home delivery to an individual customer was estimated by one source at 5d.

Some bread firms, notably the co-operatives have, consequently, attempted to sell a wider range of goods in an attempt to make retail bread rounds economic. In many instances, however, trade of these non-bread items has been variable and disappointing.

The C.W.S. and the retail co-operative societies, as the largest firms dependent on home delivery, have recently adopted the policy of reducing the importance of bread delivered to customers. Retail rounds of marginal profitability have been eliminated or amalgamated with other rounds.

Some retail societies have practised their price cutting campaigns with the partial aim of reducing door to door sales. The co-operative societies in the North East, which reduced their bread prices by 4d. in 1967, maintained normal prices on bread delivered to households. Such sales, not surprisingly, fell to very low levels. One society has maintained its shop price at 2d. below normal prices after the campaign ended in April 1967, but if the bread is delivered, the full price is charged.

The Prices and Incomes Board said the need was

"to reduce the effort that goes into the form of distribution that is most demanding in manpower and which is therefore rising most steeply in cost." (43)

(42) Ibid, para. 151, pp.61-2

(43) National Prices and Incomes Board, Report No.17, Wages in the Bakery Industry, para.47, p.13.

Some evidence, presented later, suggests that bread firms since the Board's report in 1965 have, in fact, made considerable efforts to fulfil the Board's aim.

B. Wholesale distribution :

The Board was also concerned with the costs of distribution to retail shops. The tendency for these costs to continually increase is the result of competition in the sale of bread to non-owned retail outlets between plant bakers anxious to maintain their volume of production in a period of declining bread consumption. Most retail shops have two or three suppliers of bread : some large shops have up to six. The consequence is that the amount of bread delivered by any one bakery van tends to be small. The minimum number of units delivered by one baking firm belonging to one of the major organisations is 30 per week. (44) Since bread is delivered six days a week, this meant that a small grocers shop will receive a call from a wholesale van to deliver just five units per day.

Th uneconomic nature of such small deliveries seems beyond doubt. It is a supposition not weakened by the claim made by some trade sources, that the so-called uneconomic nature of bread distribution is more apparent than real. The argument put forward is that economies in production from volume sales permit seemingly high average costs of distribution. This argument, however, underestimates the high marginal costs of small deliveries to grocers and general shops. One source stated that the labour and vehicle cost of making a delivery by a wholesale van had been estimated at 9s. 6d. If this call involved no more than a two mile trip from a previous delivery stop, the marginal net revenue from the delivery of seven or eight standard loaves is unlikely to be positive. Numerous retail shops take just over the minimum required for a delivery of bread.

It was, presumably, in this light that the Prices and Incomes Board stated that:

"A quicker reduction (in distribution costs).....might be effective if manufacturers could agree on an apportionment of streets as between them instead of their trundling their vans competitively up and down the same streets." (45)

The Board, however, presented no data quantifying the extent of resources used in this competitive rivalry, nor did it estimate the potential reduction that might be achieved in retail prices. The Board's recommendation implies that consumers are indifferent as to the brand sold by bread manufacturers, that is they would be prepared to transfer custom if necessary to the firm apportioned the trade of a particular area.

Some trade source contended that brand sources were sufficiently strong that housewives would take steps to ensure that they obtained their favoured brand of bread. In Chapter 2 it was argued that product differentiation has, however, not been sufficiently established for brand loyalties to be very strong. Hence it may be doubted whether consumers would be very reluctant in practice to buy bread from the particular firm apportioned the trade in one locality.

(44) 1 unit = 1 large loaf, 2 small loaves, or 3 starch-reduced loaves.

(45) National Prices and Incomes Board, Report No.3, Prices of Bread and Flour, para. 47, p.13.

The more general opinion in the industry is that such restricted areas of distribution would involve a return to wartime conditions, when elaborate regulations existed to control the market served by bakers. While such practices were perhaps desirable at a time of national emergency, the trade abhors it as a peacetime situation. The major firms insist that the elimination of competition in this way would have serious repercussions for bread quality. They state that the competitive spur is vital for an efficient bread industry. The whole issue, however, requires much closer analysis to judge between the loss of competitive pressures and the potential savings achievable through a rationalisation of distribution routes. What is required is an exhaustive economic-engineering study of the various cost relationships as, for example, made by R.G.Bressler of milk distribution in New York. (46)

The conclusion that the distribution of bread to retail shops is characterised by uneconomic deliveries seems to receive support from changes made recently by the major bread firms. One such change has been the growing importance of agents. These agents are given a retail round by a bread firm and generally hire a van from the latter. Agents are not paid by the baking firm but retain the profits of the retail round, based on a discount of 25 per cent. The use of agents is not a new phenomenon, but bread firms have considerably increased their numbers in the past few years. This "franchise selling", as it is called, has, however, been found more profitable than delivery by the firm itself and helps solve the staffing problems currently facing bakery management. This staffing problem arises from the frequency of bread delivered to retailers.

Large food chains require twice daily delivery. To maintain this frequency of distribution the major baking firms require not only a large staff, but also a large number of vehicles. The bakers are second largest users of vehicle transport in the country. (47) Associated British Foods has about the largest corporate fleet of vehicles in the country. (48) However, the major baking firms are currently reorganising their distribution to retail shops. One organisation has reduced its complement of "van boys" by nearly 20 per cent in the past four years, and withdrawn about 160 rounds. Another major firm by replanning routes and appointing 140 agents has managed to reduce its vehicle requirements by over 500 vans. One bakery belonging to one of the major firms stopped delivery to 130 small grocers in 1967. There has been a concentration of bread trunked over long distances into fewer depots. Bakery management is becoming less tentative in determining a minimum size of "the wholesale drop" to grocers.

C. Despatch :

Firms are also attempting to remedy one of the weak links in the distribution process which is at despatch.

(46) BRESSLER, R.G., City Milk Distribution, Harvard Univ. Press, 1952.

(47) The Observer, 7th January, 1968.

(48) Financial Times, 5th October, 1967.

Bread can be sliced and wrapped at the end of the production line having been untouched by hand throughout the whole production process. The loaves are then stacked in crates for loading into vans by hand. The bread firms have an integrated wholesale function for bread to perform. This is the usual function of the breaking of bulk for deliveries to retailers. Bread firms are aware that this wholesale function is not in general efficiently performed at despatch and efforts are being made to speed the flow of bread from production line to vans. Until recently this despatch process was even more inefficient in its use of labour, through the practice of the Bakers' Union of preventing labour transferability between men engaged on despatch and on production. This demarcation of jobs ended in 1966 when the Union accepted the proposal of transferability made by the Prices and Incomes Board at the time of the new wage agreement.

VI. Cost of Sales Promotion :

Bain has stated that

"a certain modicum of selling activity and cost devoted to informational purposes are essential to the effective working of a market system. Persuasive promotion and its costs are basically wasteful, and the more so as they become larger". (49)

Even if one accepts this proposition the problem is to draw a distinction between persuasive and informational advertising. It is a matter of degree where informational advertising shades into promotional activities of a dominantly persuasive and competitive orientation.

Bain has concluded that in the United States industries in which the costs of advertising are equal to five per cent or more of sales revenue, nearly all advertising effort has a persuasive orientation. He thus suggests five per cent of sales revenue as "the limit of tolerance" (50) in making normative evaluation of industry advertising.

Advertising in the press and on television by the major baking firms is around 0.6 per cent of sales. If allowance is made for other promotional expenditure, the total sum spent is less than two per cent of bread sales revenue. The bread industry's promotional expenditure thus falls well within the norm set by Bain.

But such a norm is too simplistic since the percentage spent should vary according to the market situation. Five per cent may be insufficient for cases where the supply of adequate information is very costly, and excessive elsewhere.

Bread is a well known and frequently purchased product and there are high cross elasticities of demand for the national brands. There thus appears little justification for extensive advertising in order to inform consumers of respective products. However, promotional expenditure on new brands such as Tiger, Top Taste and the recently introduced dietary loaves - e.g. the Cambridge Formula Loaf - can be justified as essential informative advertising.

(49) BAIN, J.S., Industrial Organisation, p.389

(50) Ibid, p.391. The Report of a Commission of Enquiry into Advertising, (Lord Reith, Chairman) also defined "substantially advertised products" as those of 5 per cent or more. The Labour Party, London 1966, p.42

Even though advertising constitutes less than two per cent of sales revenue a major part of bread advertising seems persuasive in orientation. The prejudice against persuasive advertising stems from the fact that differing market situations by firms can be achieved through promotion which have nothing to do with productive efficiency. Nevertheless it is easy to ignore the real benefits to consumers from advertising.

"Advertising provides a net subsidy to the press, television and other media (cinemas, transport, etc) of the order of £200 million a year". (51)

In any case, there are several factors preventing a much greater percentage of total revenue being spent on advertising by the major bread firms than at present. Since bread is a low priced food item and purchased frequently, consumers are more conscious of its price than for many other products. This limits the extent to which costs can be passed on to consumers in higher prices. Furthermore none of the three conditions postulated by Borden (52) for the effective use of advertising are satisfied. There is a restricted ability to differentiate the product and no hidden qualities existing that cannot be judged at the time of purchase. No strong emotional buying motives exist, such as the protection of health or the enhancement of social position.

This theoretical reasoning is in fact supported by the trade's attitude to advertising. Executives in the major bread firms concede that the industry's total advertising has not prevented a continuing fall in consumption. Advertising is considered a poor means of developing brand allegiance since the products of competing firms are regarded by consumers as fairly homogeneous. They contend that their promotional activity is largely designed as a defensive measure in the context of the importance of large food retailing outlets. These outlets like to handle items extensively promoted by manufacturers, especially when sold in extensive supermarket and self-service stores, when returns per square foot need to remain high. Advertising thus asserts the importance of bread firms at a time of the increasing market power of large retail chains.

Vll. Participant Rationality :

Participant rationality relates principally to rational behaviour of consumers whose decisions are taken in the light of adequate information concerning prospective purchases. Sosnick says a market is deficient if providing further information that at present available would have greater benefits than costs. The quantification of any deficiency is, however, a difficult one.

Rational behaviour is equally difficult to define, and scientific evaluation is rarely possible because matters of taste are involved. Sosnick thus suggests that

"the only available criterion of wise choice is that participants have a reasonable opportunity to be well informed when making their selections". (53)

(51) DOYLE, P., "Advertising and Economic Policy", District Bank Review No.164, December 1967, p.45.

See also Economists Advisory Group, The Economics of Advertising, esp. Chap. Five for an assessment of advertising in relation to competition, barriers to entry, etc., The Advertising Association, London 1967.

(52) BORDEN, N.H., The Economic Effects of Advertising, Irwin, Chicago, 1942.

(53) SOSNICK, S., "Operational Criteria for Evaluating Market Performance", p.120.

There is a large number of bread shops in the country as a whole and also locally. It was seen in Chapter 2 that there are 148,000 bread selling shops in the United Kingdom. The Cambridge branch of the Consumers' Association enumerated 169 shops of all kinds selling bread in that locality. In Cardiff there were 101 shops selling bread made just by master bakers.(54) Furthermore, the growth of supermarket food chains will ensure a wide choice of sliced, wrapped bread.

The Weights and Measures legislation means that there are no problems of misleading sized goods or packages. Standard bread has to be sold in multiples of 14 ozs., so that a standard small loaf is 14 ozs and a standard large loaf at 28ozs. The regular pattern of purchases and the purchasing of various types of bread from time to time for particular purposes also helps to permit a wide knowledge of alternative types of bread.

VIII. Labour Relations :

In general, there are good labour relations in the baking industry. It is the opinion of management in the major firms that there is a considerable degree of co-operation with the Bakers' Union, both at firm level and in negotiations on changes in wages and working conditions at national level.(55)

There has been only one strike in forty years by the Bakers' Union. This took place in November 1965 when the Union insisted on its wage claim, which it held was justified in view of the increased efficiency of the industry resulting from the adoption of automation. It held that it had not opposed the introduction of machinery and the displacement of labour by machines, and would not be placated by the offer by management of greater overtime.

The Prices and Incomes Board accepted the aim of the Bakers' Union for reducing the disparity between basic wage rates and the wage earnings, and put forward the proposal that production workers should be paid a guaranteed minimum wage. This has now been introduced, but on the basis of a 40 hour week and not that of a 46 hour week, as proposed by the Board. At the same time the Union has agreed to a more flexible pattern of working hours, the rotation of rest days, and the inter-changeability of men between different jobs in the same grade. (56)

IX. External Effects :

These external effects include, for example, water pollution, unpleasant fumes and odours, which are burdens that market participants impose on others but could avoid at relatively "small" cost.

In the bread industry night work has long been common. The disruption of social life caused by night working could, presumably be subsumed within the category of external effects, but of a rather special kind.

(54) Journal Consumers' Association, "Bread", Which, August 1966.

(55) WESTON, G.H., then Vice-Chairman of Associated British Foods, in his address to shareholders in December 1965 spoke of "the exceptionally fine record of industrial co-operation that has existed between the Unions and management in this industry". See The Economist, 11th December, 1965, p.1260.

(56) These were all proposals made by the Board in its Report No.17, Wages in the Bakery Industry, pp.9-12.

The "cost" of reducing the present necessity of baking bread early in the day is that of discovering a loaf with better keeping qualities. The baking firms contend that this cost is a large one. Certainly no solution seems yet in sight. However, judged by the effort made hitherto, these firms appear to be imposing burdens not on outsiders but their own workers. (57) The urgent need to extend the keeping qualities of bread on grounds of costs in more general terms, is argued in discussion of the distribution efficiency of the industry.

X. Unethical Practices :

In this dimension the adjective denotes a categorical norm. The presumption in favour of buyers' sovereignty allows outright condemnation of fraud, misrepresentation, bribery, collective boycotts, price discrimination, etc.

In Chapter 3 it was concluded that there was no evidence to show the widespread existence of predatory or exclusionary tactics employed by firms in the bread industry. Since unethical practices have, in effect, been discussed within the chapter on market conduct, further discussion is not made here.

Other Dimensions :

Two of the dimensions of market performance put forward by Sosnick - exchange efficiency and the level of output - have not been adequately defined in a qualitative sense and are also quantitatively difficult to measure.

Sosnick defines exchange efficiency as including price formation, price flexibility and the relationship between potential and actual gains from trade. Preston and Collins have put forward various market characteristics such as "viability-stability", and "the ratio of units traded to marketing effort", but the problem is then one of an applicable, empirical norm, even assuming such aspects of a market's functioning can be measured. (58) There can be no doubt about the importance of the pricing efficiency of markets but there is a difficulty in grappling with the concept analytically.

The presence of excess profits in an industry is a potential indicator of restriction of output by firms. The low level of profitability in the bread industry and, indeed, the market conduct of firms, clearly shows that there is no deliberate restriction of output.

The dimension termed by Sosnick "conservation performance" applies to a restricted number of industries and does not include the baking industry.

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- (57) Night baking has been the subject of two reports which have shown the problems involved in day baking, See Report of the Departmental Committee on Night Baking, Cmnd.5525, H.M.S.O., London, 1937, Report of the Committee on Night Baking, Cmnd. 8378, H.M.S.O., London, 1953.
- (58) PRESTON, L.E. and COLLINS, N.R., "The Analysis of Marketing Efficiency" Jour.Mkting. Res., Vol.111, May 1966, pp.154-62.

CHAPTER 5

APPRAISAL AND CONCLUSIONS

In the first section of this chapter appraisal of the bread industry is made by reference to a list of market structure, conduct and performance criteria. These criteria are based on the norms defining workable competition suggested by Sosnick. In the subsequent section the nature of relationships between the dimensions of market structure, conduct and performance are examined. A section then draws a number of parallels with the baking industry in the United States, and is followed by a discussion on proposals for public policy towards the bread industry.

1. The "Workability" of Market Structure, Conduct and Performance :

In Chapter 1 it was stated that the present theory of workable competition consists of specifying a set of mutually consistent norms for all dimensions of a market. Appraisal is now made of the bread industry in terms of the adequacy of each market dimension. By "adequate" is meant that the dimension in question satisfied the condition necessary for workable competition sufficiently well "that one should be neither excited nor inert about the deficiencies". (1) The index of workability adopted is as follows:-

optimum, almost optimum, adequate, almost adequate, largely inadequate, inadequate, very inadequate. (2)

	<u>Norm</u>	<u>Rating</u>
<u>STRUCTURE</u>		
1. Number of firms of no more nor less than plant scale economies permit		Too many, but improving.
2. Size of firm and market concentration no greater than plant scale economies requires		National level: somewhat too large and deteriorating. Local level : inadequate size, but improving.
3. Vertical integration no more nor less than efficiency requires		Too extensive and deteriorating.
4. Barriers to entry:		
(a) Product differentiation		Low to Moderate.
(b) Absolute cost disadvantages		Local Market : Low. National Market : High.
(c) Economies of scale		Local Market : Moderate. National Market : Low.
(d) Outlets		Moderate.
(e) Overall barriers		Low to Moderate.

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- (1) SOSNICK, S., "A Critique of Concepts of Workable Competition", p.411.
(2) MOORE, J.R. and WALSH, R.G., "Cross-Sectional Analysis of the Agricultural Industries", Chap. 15, in Market Structure of the Agricultural Industries, p.394

<u>CONDUCT</u>	<u>Norm</u>	<u>Rating</u>
1. No tacit or express price collusion		Largely Inadequate.
2. Sales promotion not misleading		Adequate.
3. No unfair or exclusionary tactics		Adequate.
4. No shielding of inefficient practices through continual price increases		Inadequate.

PERFORMANCE :

1. Operational efficiency		
(a) Procurement of raw materials		Adequate.
(b) Plant utilisation		Largely Inadequate.
(c) Plant scale		Inadequate.
(d) Distribution efficiency		Inadequate.
2. Attention to opportunities for better products and techniques		Inadequate.
3. Product quality conforms to consumers' wishes		Adequate.
4. Profits at levels which reward efficiency and innovation at necessary but not excessive rates		Inadequate.
5. No restriction of output		Adequate.
6. Promotional expenditure not excessive		Almost Adequate.
Overall Market Performance		Largely Inadequate.

11. Structure-Conduct-Performance Relationships :

The production of bread in the United Kingdom is increasingly being concentrated in fewer, but larger plants. Bakery firms are making considerable efforts to rationalise their distribution systems. Plant bakers have quickly adopted the Chorleywood bread process. The increasing importance of large food chains means that large bakery firms compete with one another on wholesale bread prices. Moreover the barriers to entry by food chains are low.

Nonetheless the view is taken that the market performance of the bread industry is largely inadequate.

1. Relationship between operational efficiency and concentration of production and entry barriers :

Although bread baking has been increasingly concentrated into fewer hands there remains a large number of sub-optimal sized plants. Low barriers to entry into baking and a continuing fall in the consumption of bread are two factors which have contributed to the industry being "overplanted". There has been an insufficiently rapid withdrawal of high cost plant of marginal profitability such that the bulk of bread is baked in inefficiently sized plants.

However, it must be borne in mind that there is no strong association in British industry between the degree of seller concentration and the relative size of the fringe of inefficiently small plants and firms. (3) Moreover, the occurrence of such a fringe of sub-optimal plant seems as likely to occur with difficult entry conditions to an industry as with easy ones. (4)

The degree of plant scale inefficiency in the baking industry can be exaggerated. There can be in any trade the continued existence of small sized units which are not characterised by low productivity. The condition necessary is that these small firms sell at prices greater than larger productive units which operate at lower costs. Master bakers, indeed, are able to charge a higher price for the craftsman's loaf than that of plant baked bread. Thus some master bakers derive a considerably higher rate of return on capital than many plant bakeries. (5) Society clearly expresses its wish that such bakers continue to bake bread.

Nonetheless the production of plant baked bread could be further concentrated in fewer plants which obtain minimum costs per unit. But this does not require a much greater concentration of bread production at the national level, at least in terms of the cost economies achievable through plant size. In Chapter 2 it was argued that a plant of minimum optimum size would supply 1/10th of a local market and 1/250th of the national market. A firm may also derive production cost economies from the operation of two or more plants. Economies from long production runs can be gained if one plant is concerned with standard bread and a second plant production line is concerned with the production of speciality breads. If a firm had two plants in each geographically segmented market in the United Kingdom (though these markets are difficult to define), then that firm would account for about 20 per cent of total industry output.

The market share of the two largest firms is somewhat greater than this figure. Hence their size would not seem to be justified in terms of what plant scale economies require.

2. Relationship between operational efficiency and product differentiation :

The existence of sub-optimal sized plants in baking does not seem to be related to the existence of a high degree of product differentiation. Bain (6) has found that industries in which product differentiation is extensive are characterised by a substantially larger fringe of inefficient plants than industries where product differentiation is of minor importance. The growth of large firms in baking has essentially been based on the acquisition of bakeries and not through extensive brand advertising such that remaining firms have a limited market in which to sell at favourable prices.

(3) See Political and Economic Planning, Thrusters and Sleepers, George Allen and Unwin, London, 1965.

(4) For example in steel or flour milling, where entry barriers are significant; in food retailing where barriers to entry are low.

(5) The Prices and Incomes noted that the return on capital of some master bakers was 12 per cent per annum (pretax and with assets at balance sheet values), Report No. 3. Prices of Bread and Flour, para. 32, p.9.

(6) BAIN, J.S., Barriers to New Competition p.186

3. Relationship between market structure and conduct and rate of profits :

The rate of profits is a strategic dimension of market performance since profit is the motivation of firms in a private enterprise economy. Excess profits can be symptomatic of monopolistic output restriction and high prices, and thus of a lack of competition.

The bread industry in the United Kingdom is one in which four large firms together account for 70 per cent of bread sales. Firms in an oligopolistic industry are strongly interdependent, a situation in which parallel behaviour could be against the interest of consumers. This is especially significant in respect of prices charged. Mason has stated that "the theory of oligopoly is a ticket of admission to institutional economics", (7) in recognition of the opportunity for collusion by a few large firms to result in monopolistic profits.

Cross-sectional studies in the United States have found a definite relationship between the degree of seller concentration in manufacturing industries and their rate of profits.(8) Reports of the Monopolies Commission in the United Kingdom have also shown the prevalence of excess profits derived by firms dominating particular industries.(9)

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- (7) MASON, E.S., "Price and Production Policies of Large-scale Enterprise", Amer. Econ. Rev., Vol.29, Suppl. March 1939, p.65
- (8) BAIN, J.S., "Relation of Profit Rate to Industry Concentration", Quar. Jour. Econ., LXV, No.3. August 1951, pp.293-324, also MANN, H.M., "Seller Concentration, Barriers to Entry and Rates of Return in Thirty Industries, 1950-60", Rev. Econ.Stat., XLVlll, No. 3, August 1966, pp.296-307 and COLLINS, N.R. and PRESTON, L.E., "Concentration and Price-Cost Margins in Food Manufacturing Industries", Jour. Ind. Econ., Vol. XIV., No.3, July 1966, pp.226-242.
- (9) The Monopolies Commission,
Report on the Supply of Chemical Fertilisers, July 1959.
Report on the Supply and Processing of Colour Film, April 1966.
Report on the Supply of Electrical Equipment for Mechanically Propelled Land Vehicles, December 1963.

However, despite their collective importance in the industry, the major bread firms do not derive monopoly profits. Indeed, the rate of profit in recent years, expressed as a return on capital employed, has been shown to be considerably below the average for manufacturing industry in the United Kingdom. This low profitability of bread manufacture is thus contrary to theoretical prediction, which also has some support from empirical studies. It is the more surprising when this enquiry lends some support to the existence of institutional forces in the manner postulated by Mason. There is a suspicion of market behaviour approaching what the United States Federal Trade Commission has described as "conscious parallelism of action". (10)

Retail prices of bread have steadily increased in recent years (Chart V1, Chapter 4). Nonetheless the rate of profits of plant bakers has tended to fall. This has been mainly the result of a rapid rise in distribution costs. Some trade sources, however, claim the low return on capital invested in baking has been the result of the continual concession of discounts to large food chains. They also hold that the desire to increase retail prices in order to maintain total revenue has been frustrated by governments on account of the political interest in such a basic food-stuff. The direction of causation between rates of discount and price increases in fact seems to run the other way. When bakers have increased retail prices food chains have attempted to seek bigger retail margins on bread. By pressing for a higher rate of discount these chains obtain part of the additional revenue accruing to bakers from the price increase.

4. Relationship between market structure and nature of market conduct:

The strong interdependence of the major baking firms enhances the importance of non-price competition and has the effect of raising selling and distribution costs. But because product differentiation is comparatively weak in the bread industry, the percentage of selling costs devoted to sales promotion is low in relation to total turnover. This is not the case, however, with other selling costs and especially labour involved in distribution.

The Prices and Incomes Board suggested that the government might consider two recommendations which would reduce costs, but required agreement between baking firms. These proposals related to restricted delivery areas and the range of bread produced by plant bakers. At present such agreements between firms would be in the breach of the legislation governing restrictive trade practices. However, research is required to establish the size of potential savings from a rationalisation of delivery routes. Since the Board reported in 1965 baking firms have themselves effected considerable economies in bread distribution.

(10) See NEALE, A.D., The Anti-Trust Laws of the United States of America, Nat. Instit. Econ. Soc. Res. Econ. and Soc. Study No.29, Cambridge Univ. Press, 1960, pp.91-4.

5. Relationship between market structure and research expenditures :

It is often argued that research and development are a practical proposition only in the case of relatively large firms.(11) However, several studies (12) show that the relationship between the extent of research and development effort and firm size is not a strong one.

The British Baking Industries Research Association was founded in 1946 as a result of the work of a group of master bakers who felt that there was need for a research station working specifically on their behalf. It would deal with the service problems of bakers and carry out basic research on the materials and methods employed by the industry. There are few explicit principles by which to determine the optimum size of a research association for an industry. Nevertheless despite the present large sized firms in baking their own research expenditures have been small. The support for the trade research station at Chorleywood has also been weak. Recent experience thus suggests that large firms in baking do not ensure rapid advances in technology despite their capacity to devote large sums to research and development.

111. The United States Bread Industry:

There are many similarities between the bread industries of the United Kingdom and the United States. The concentration of production into fewer firms has increased in both countries since 1945. The four largest companies in the United States, however, in national terms account for a much less significant proportion of total output than their counterparts in the United Kingdom. (13) Concentration of production has taken place in the United States against a background of a rapid decline in the number of bakeries.(14). The total number of establishments fell by 17 per cent between 1958 and 1963. (15) Business failure has been a factor of much less importance than mergers in accounting for the increased concentration of production in the United Kingdom.

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- (11) See discussion by SWANN, D. and McLACHLAN, Concentration or Competition; A European Dilemma., P.E.P., London, 1966, esp.pp.15-31.
Also
Shipbuilding Inquiry Committee 1965-1966, Report (Geddes Report), Cmd.2937,chaps.14,17.
Also
FREEMAN, C., "Research and Development in Electronic Capital Goods", Econ.Rev., Nat.Inst.Econ.Soc.Res., No.34, November 1965, pp.40-69.
- (12) For instance
WORLEY, J.S., "Industrial Research and the New Competition", Jour. Pol.Econ., Vol.69, No.2 April 1961.
MANSFIELD, E., "Industrial Research and Development Expenditures", Jour.Pol.Econ., Vol.2, No.4, August, 1964
- (13) Report of the National Commission on Food Marketing gave figures for 1954 as 20 per cent; 1958 as 22 per cent and 1963 as 23 per cent. Milling and Baking, Chap. 8, p.59.
- (14) "Between 1947 and 1954, the number of bakeries going out of business was at the rate of two and one half times the rate for all food processers. More than half of the postwar decline in total number of processers in the 30 major food industries occurred in the bread product industry", WALSH, R.G. and EVANS,B.M., Economics of Change in Market Structure, Conduct and Performance, The Baking Industry, Univ. of Nebraska, Lincoln, 1963,pp.9-10.
- (15) In 1958 there were 6,026 bakery plants; in 1963, 5,010 plants. Bureau of the Census, 1963 Census of Manufacturers, Bakery Products, MC 63(2)-20E-4, Table 1.

Mergers explain most of the increased share of total bakery sales of the eight largest baking companies in the United States. (16) Most but not all of the merger activity of baking companies has been horizontal integration. But 29 per cent of mergers by baking companies between 1952 and 1956 were the conglomerate type representing diversification into other industries. (17) Mergers and diversification are thus common to both baking industries.

Capacity utilisation in the United States is considerably lower than in the United Kingdom. The average plant utilisation was only 80 per cent for 284 plants studied by the National Food Commission. (18)

The National Commission on Food Marketing noted that the costs of selling and distribution of bakery goods had increased more rapidly than other costs in the decade to 1966. (19) The Commission stated that in recent years there has been a significant increase in the varieties of bread. Its conclusion that "bakers' economies of large capacity have been diluted by the proliferation of bread varieties" (20) is identical to the view of the Prices and Incomes Board of the United Kingdom bread industry.

The profitability of bread manufacture is also low in the United States. When expressed as a percentage of sales, profits have shown a long term decline. (21) As in the United Kingdom, the price of bread in the United States has risen faster than for all consumer goods. In the period between 1947 and 1958 the average retail price of food products increased 24 per cent and of consumer products 26 per cent. The retail price of white bread rose by 54 per cent. (22)

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- (16) WALSH, R.G. and EVANS, B.M., op. cit., p.24.
- (17) WALSH, R.G. and EVANS, B.M., op. cit., p.25.
- (18) National Commission on Food Marketing, Organisation and Competition in the Milling and Baking Industries, Technical Study No.5, p.55.
- (19) Report of National Commission on Food Marketing, Milling and Baking, Chap. 8, p.59. It stated that "moving the bread from the bakers' platform to the consumer in a retail store costs almost as much as it does to grow the wheat, mill the flour and bake the bread..... It is not unusual for five or six different wholesale bakeries to deliver to a supermarket each day This duplication of service contributes to high delivery costs."
"Output per production worker man-hour increased between 1947 and 1958 at a rate comparable to that achieved in the total economy..... Output per nonproduction worker man hour was 80 per cent of 1947 in 1958, and 85 per cent in 1958." STOREY, D.A. and FARRIS, P.L., "Market Performance in the Baking Industry", Jour.Mktng., Vol.28 January 1964, pp.23-24.
- (20) Report of the National Commission on Food Marketing, p.58.
- (21) The profits of wholesale bakers as a percentage of sales fell from 4.9 in 1950 to 3.4 in 1956 to 2.8 in 1964. Report of the National Commission on Food Marketing, p.60.
- (22) WALSH, R.G. and EVANS, B.M., op. cit., p.117,

IV. Proposals for Public Policy :

A. Improvements in Census data :

The Census of Production defines the Bread and Flour confectionery industry as including "all establishments engaged in making bread, cakes, pastries, pies (other than meat pies), puddings (other than meat or canned puddings) etc." There are, however, doubts about the existence of high cross elasticities of demand among this group of products. The Census clearly includes in a single aggregate several theoretical industries and is too broad a grouping for analysis of changes in structure of trades within that grouping.

The United States Census of Manufactures has its weaknesses of classification but its multi-digit groupings does permit the concentration of production to be examined at various levels, i.e. sales of the two largest firms, the four largest, the eight largest, etc. (23) There is valuable data on assets and employment of firms. The content of U.S. Census data is therefore much greater than the amount of information given by the United Kingdom Census. A further weakness of the United Kingdom Census of Production has been changes in classification procedures and definitions. Armstrong and Silberston faced the problem of changes in the definition of plants in their analysis of structural changes between 1935 and 1958. (24) Such changes in definition limit for example the use of Markov chain analyses to predict the course of concentration of production.

The value of Census data is further reduced by the time taken before data is published.

B. Greater information from firms :

In the United Kingdom the legislation relating to company accounts has not required firms to publish extensive information concerning their principal activities. One would have thought that shareholders were entitled to know more details of firms. This is especially important in the case of conglomerate firms. It would seem undeniable that management should account for their decisions and show the employment of capital invested by shareholders. Furthermore society has obvious interests in the activity of firms. Institutions in society which oversee those interests require information of firms in order to identify and evaluate subjects which are of sectional and general concern.

(23) The United States Standard Industrial Classification defines 425 product groupings. The definition of trades becomes progressively narrower with successive additions of numerical digits. At one extreme there are 21 very broad 2 digit product groups; at the other about 10,000 individual 7 digit products. In between there are approximately 150 3 digit product groups, 425 4 digit industries and 1,100 5 digit product classes.

(24) ARMSTRONG, A. and SILBERSTON, A., "Size of Plant, Size of Enterprise and Concentration in British Manufacturing Industry 1935-58". Jour. Roy. Stat. Soc., Vol. A, 128, 1965, pp.395-420.

J. Lyons is the fifth largest bread firm, but did not disclose its total sales until 1968. In his statement for the year 1966-67 the Chairman said Lyons "is fundamentally a food business" and "the great bulk of profit is earned in the United Kingdom". (25) Shareholders presumably want to know how much profit comes from baking, how much from catering, groceries, frozen foods and instant coffee. They were merely told that catering turnover was about one-sixth of the total and the profits of the group of ice cream companies.

The 1967 Companies Act now requires firms to state total turnover (when greater than £50,000), their principal activities and any changes during the year. Nevertheless it does not require them to publish their accounts by principal form of activity, and it is to be hoped that a new Companies Act will implement this proposal.

C. Government regulation :

1. Mergers :

The two principal institutions by which government policy influences industrial performance are the Monopolies Commission and the Restrictive Practices Court. Proposals emanating from the Prices and Incomes Board and adopted by government have also contributed to regulating industry.

None of the major baking firms as yet accounts for one third of total output which could make it the subject of a reference for study by the Monopolies Commission. Nevertheless the two largest firms - Ranks Hovis McDougall and Associated British Foods - each account for over 20 per cent of the total market, a level which can be justified with an optimal sized plant in each geographical segmented market. The Monopolies and Mergers Act of 1965 gives the Board of Trade power to prevent mergers leading to dominant market situations. The Board of Trade can delay mergers pending a report by the Monopolies Commission, forbid mergers, and order divestiture in respect of mergers already accomplished. A merger between the two leading baking firms, or between Spillers and either of them, would clearly warrant an investigation in view of the market power thus promoted. Such mergers would not seem to be justified in terms of economies which are not obtainable to any of the relevant parties on its own at present.

2. Price Control :

The Restrictive Practices Court in 1959 ruled that the price agreements between plant bakers in England and Wales and bakers in Scotland were against the national interest. Information agreements have operated until recently.

There are a number of reasons for expecting firms in the bread industry to increase prices more or less simultaneously. However, the concentration of production in a few hands makes conscious parallelism of action a real possibility. Theoretically baking firms could derive monopoly profits by collectively raising prices. The political interest

(25) The Economist, 24th June, 1967, pp.1399-1400.

in this basic foodstuff and to some extent also the fear of integration into baking by food chains prevents this possibility being likely. But the fact that plant bakers are highly unlikely to derive excess profits does not detract from the need for an effective public policy to prevent concerted price increases which cover excess costs.

The Registrar of Restrictive Trading Agreements and others have pointed out that information agreements have often replaced formal price pacts between firms. The bakery industry has been no exception. The requirements to register information agreements under the 1968 Restrictive Trade Practices Act is to be welcomed. Nonetheless the record of price increases in the past decade begs further examination.

In a historical context it is perhaps worthwhile stating that the price of bread has always been of political interest. It was fear of revolution, rather than any real concern for the welfare of the population, which led to the enactment of the Assize of Bread. (26) The debate concerning the repeal of the Corn Laws in 1846 fundamentally concerned the price of bread. In much more recent times the Conservative government was very tentative in its removal of the bread subsidy in 1956. (27) The Labour Party National Executive Committee's report "Labour's Economic Strategy" has suggested that certain "key prices" must be regulated. It felt that the prices of a group of commodities and services which are vital to living standards, or which are likely to set off a chain-reaction if increased must be subject to permanent review. Bread was the first item suggested for inclusion. (28)

The major baking firms since decontrol have usually informed the Minister of Agriculture, Fisheries and Food of impending price increases. They have shown a schedule of cost increases as justification for the price changes. Although the industry complains of delayed price increases as a result of this interest of government, the political "vetting" of prices has at least not prevented a continuing rising price for bread.

(26) SHEPPARD, R. and NEWTON, E. The Story of Bread, pp. 46-48.

(27) The Chancellor of the Exchequer, Mr. MacMillan, raised the price of the 1½lb. loaf by 1d. in February 1956 and so halved the size of the bakery subsidy. "The higher price was accepted by the public with little protest. No doubt this proved to Mr. MacMillan that bread prices were no longer such highly inflammable material for two months later, in his Budget, he announced that the subsidy would come to an end the following September. The same week the Minister of Agriculture and Food, Mr. Heathcoat Amory, told the House of Commons that price control would end at the same time." SHEPPARD, R. and NEWTON, E., op. cit., p.178.

(28) Published by the Labour Party August 1969.

Bakery firms in the past decade appear to have passed many of their cost increases on to consumers in the form of higher prices. The Prices and Incomes Board noted that the conclusion of new wage agreements were taken by firms as justification for increasing bread prices, thus implying that there could be no possible increase in efficiency.(29) The merit of the Board's recommendation to freeze bread prices for six months in 1965 (and again in 1967) was to force firms to increase their distribution efficiency.

In 1968 the industry had to show evidence that it had done all that could reasonably be expected by way of more effective deployment of labour and rationalisation of selling and distribution for the Minister of Agriculture to permit an increase of $\frac{1}{4}$ d. to improve the profitability of bread making. Firms were further required to devote the revenue from this increase to accelerating and augmenting their investment programmes.

It can be argued that the threat of integration into baking of food chains ensures that plant bakers offset the greater part of higher costs by increased efficiency. But in the past decade the major firms have passed on higher costs to consumers by raising prices so frequently that the force of this threat seems questionable. Indeed, food chains by deriving an increasing level of discounts from plant bakers present the latter with the choice of either reducing distribution costs and withdrawing high cost plant from production or to seek further price increases. Experience has shown that bakers have tended to choose this second alternative.

It was argued in Chapter 2 that the growing size of food chains, and hence the greater importance of a captive market for their own bakery products, would make this threat to integrate increasingly important. But if United States experience is any guide, the distribution cost advantage enjoyed by food chains who have integrated into baking is not sufficiently great for chains to exert strong price pressure on plant bakers to contain costs.

The Ministry of Agriculture has retained a strong interest in the price of bread since decontrol in 1956 apparently because the staple foodstuff is an important part of the official index of retail prices used in wage negotiations. (30)

However, the weighting in retail price index for bread, flour cereals, biscuits and cakes is only 44 in a total weighting for all items of 1000. By itself the quantitative impact of an increase in the price of bread on the level of the retail price index thus is very small. The net effect of the price changes in February 1969 was estimated to add about 0.05d to the retail price index. It would therefore seem that the Ministry's interest should rather be based on the fact that the industry does not seem to have made every effort to absorb increased costs by increased efficiency. (31)

(29) National Prices and Incomes Board, Report No.3, Prices of Bread and Flour, paras, 58-61, p.17,

(30) The Times, 2nd January, 1968.

(31) There is, of course, no competition from imports.

This would seem to present a strong case for the Ministry to receive notification of proposed increases in bread prices and have the power to delay such changes: that this power should be explicit and not dependent on whether a prices policy is currently employed by the government of the day as part of its economic strategy. This proposal would make the present procedure by which firms have increased prices in recent years making applications for permission to do so to the Minister of Agriculture - a formal one.

Price control, however, has serious disadvantages. There is the danger that prices are likely to lag behind other prices because of the nature in which pricing decisions are placed. Since bread is still regarded as a basic foodstuff governments are the more likely to freeze its price unduly when inflationary pressures are strong. Paradoxically the industry might then be seeking price increases more quickly than at present because it could never catch up with rising costs.

There is always the objection that price control is to be disliked because of interference in the freedom of firms to conduct their affairs as they see fit. Mr. Aubrey Jones, chairman of the National Board for Prices and Incomes, felt that the investigation of the Board into the bread industry was not "undue interference with freedom to determine prices, it was rather an invitation to management to keep stricter control over its costs". (32) Unsurprisingly this was a view with which the chief executive of one of the major firms could not agree. (33)

To the student of workable competition theory attachment to the unfettered working of the private enterprise is tempered by assessment of the actual performance of firms. An industry's low profits can be "remedied" in two ways: either the level of costs is reduced and further increases in costs offset by higher productivity or profit margins are increased by raising prices. Continuous recourse to the latter tends to imply that the potential for cost reduction is limited. In the case of the bread industry there does seem scope for further rationalization of distribution routes, better despatch facilities, and reduced product differentiation. This would improve the efficiency of baking and raise the attractiveness of breadmaking as an investment. Firms tend to say that capital investment in the industry is not as attractive as in other sections of activity. While not denying that scarce capital should be employed where returns are highest at the same time it is questionable whether the existing rate of return on capital invested in baking should be taken as given. Moreover it is arguable whether greater profitability itself is necessary (to cause an inflow of capital) to raise efficiency. The distribution of bread would not seem to require a capital inflow as a necessary condition for effecting economies.

If price control is rejected the Ministry is still able to have a watching brief on the industry and encourage an improvement in its market performance.

(32) JONES, A. in interview with Prof. G. Wills "The Public Forum on Prices" Management Decision Vol. 2 No.5. Aut. 1968

(33) RANK, J. Financial Times 9 September 1968.

In any subsequent request by the industry to put up prices the Ministry should consider more closely the "overplanted" nature of the industry. The policy of the Ministry of Agriculture in February 1968 in permitting a $\frac{1}{2}$ d. increase in prices was to increase the return on new investment in the bread industry. The installation of new plant cannot of course be expected when the return on capital is low. But that very situation is partly the result of the continued use of small-sized, old plant. The Ministry could approve price increases as being at least partly conditional on the faster withdrawal of high costs plant from production.

V. Future Research :

The current research programme of the industry's research station includes a study of the benefits to be gained and the problems of increased automation in the bread industry. Research is also continued at Chorleywood into the problem of bread staling (34). The importance of this latter research cannot be over-emphasised.

Concerning economic research there remain a number of issues deserving further study, such as the importance of economies resulting from the vertical integration of flour milling and baking. Research is hampered by the lack of data to hand for reasons given earlier. Many aspects of consumer behaviour have been studied by the industry but have not been published. (35) But the major field requiring research is that of bread distribution.

In the United States Walsh and Evans have estimated that total costs of bread production and distribution could be reduced by more than £ 1 billion. Comparison of the existing system with an optimum market organisation suggested that the average retail price of bread could be reduced by 50 per cent. They estimated that the potential savings in distribution and selling costs were of the order of £ 530 m. (36)

The Prices and Incomes Board have made the proposal of restricting the distribution area of bakeries. Research is required to estimate the extent of the potential cost savings, based on the economic-engineering method as adopted by Bressler.

It is also greatly hoped that further study of the industries ancillary to agriculture will be made to permit cross-sectional analysis and determination of common economic problems facing the agribusiness sector.

(34) See discussion of activity of the Association by its director in Bakers Review, 13th October, 1967, pp.1716-7.

(35) E.G. Study made for the three largest firms by Market Investigations Limited, Attitudes to Bread : Quantifying Study, December 1965.

(36) WALSH, R.G. and EVANS, B.M., Economics of Change in Market Structure Conduct and Performance. The Baking Industry, p.152.

