# PRICE THEORY AND BUSINESS BEHAVIOUR

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FOR several years a group of economists in Oxford have been study-
ing problems connected with the trade cycle. Among the methods
adopted is that of discussion with business men, a number of whom
have been kind enough to submit to questioning on their procedure
in various circumstances: and among other matters in the question-
naire were inquiries about the policy adopted in fixing the prices and
the output of products. Mr. Harrod and Mr. Hall have given some
of the results of these questions in papers read to the British Associa-
tion, Section F, in 1937 and 1938. Neither of these papers was pub-
lished, and the present paper includes the evidence on which they
were based as well as what has been collected since: it also extends
and modifies the theoretical structure which has been emerging from
the facts. The data which it contains have been collected by various
members of the group, and the results have been discussed at its
meetings. The authors are responsible only for the form of their
presentation and for the speculative part of the paper.

  The purpose of the paper is to examine, in the light of the inter-
views, the way in which business men decide what price to charge
for their products and what output to produce. It casts doubt on
the general applicability of the conventional analysis of price and
output policy in terms of marginal cost and marginal revenue, and
suggests a mode of entrepreneurial behaviour which current economic
doctrine tends to ignore. This is the basing of price upon what we
shall call the 'full cost' principle, to be explained in detail below.

## 1. Significance and limitations of the evidence

  The method followed has been to submit the questionnaire to
business men who were willing to answer it, and to discuss the ques-
tions and answers at length in an interview. The authors are acutely
conscious of the shortcomings of an inquiry of this kind. We con-
sidered the evidence of only 38 of the entrepreneurs interviewed,
which is far too small a sample to warrant any final conclusions. Of
these, 33 were manufacturers of a wide variety of products, 3 were
retailers, and 2 builders. The sample is thus strongly biased in favour
of manufacturers, and any conclusions relate particularly to this type

of entrepreneur. It is also biased by the fact that most firms were approached through personal introductions, and it is probable that the entrepreneurs interviewed were more successful and more intelligent than the average business man. In the light of the smallness and the biased character of the sample, no significance can be attached to the precise percentages of firms behaving in particular ways. But on some questions the replies are so nearly unanimous that it is impossible to ignore their implications; and in general the answers fall sufficiently clearly into patterns to leave no doubt in the minds of the authors that current economic theory tends to regard behaviour that is of small practical importance as typical, and what is a well-marked mode as unusual.

In the body of the paper only the summary results of the evidence will be given. This evidence has been taken in large part from the specific answers to the relevant questions, but it has been necessary, in some cases, to supplement the information in the light of subsequent discussion and subsidiary questions. The answers of the entrepreneurs have been paraphrased, under appropriate headings, in the Appendix, pp. 33–45: these should be regarded as an integral part of the present paper, some sections of which will be much clearer when illustrated by the actual expressions on which the argument has been based.

## 2. Current doctrine on price and output policy

The basis of current doctrine on the price and output policy of the entrepreneur is that he expands production to the point where marginal revenue and marginal cost are equal. In the special case of perfect (or 'pure') competition in the market for the product, marginal revenue is equal to price, to which marginal cost is equated. In the special case of pure competition in the market for the factors, marginal cost is equal to the cost of the additional factors necessary to expand output by one unit, and this is equated to marginal revenue. In all other cases (except where discriminating prices may be charged), marginal revenue is less than price, and marginal cost is greater than the cost of additional factors, and the only rule of equilibrium within the firm is that marginal revenue and marginal cost are equated.

The equation of average cost and average revenue, if it occurs at all, is assumed to take place as the result of the entry of new firms

where average revenue exceeds average cost, and by the dropping out of old ones where the reverse is the case (i.e. under the stimulus of profit or loss). It is not an equation which any particular entrepreneur attempts to bring about, or indeed one which he desires. It is customary to distinguish, somewhat unsatisfactorily, between industries in which 'free entry' is possible, in which there is a long-run tendency for average revenue and average cost to be equated; and others in which there are obstacles to free entry, where this tendency does not exist.

The precise content of the terms 'marginal and average revenue' and 'marginal and average cost' is usually left in obscurity.[1] Most writers, including Professor Chamberlin, have concentrated on long-run equilibrium, where the difficulties of finding the appropriate content for the curves is least. Even here, however, there are the extremely important questions: on the cost side, of the allocation of selling costs; on the demand side, of the functional relation between selling costs and the demand curve, and of the nature of the demand curve. Is the relevant demand curve 'real', i.e. does it show what actually happens when price is changed; is it hypothetical, in the sense of being based, like Marshallian demand curves, on some particular assumption regarding the behaviour of other firms; or is it imaginary, i.e. does it merely show what the entrepreneur believes will happen when price is altered? Professor Chamberlin is the only writer who has attempted a systematic solution of these difficulties, and it cannot be claimed that his treatment is definitive.

In the short run, which has been relatively neglected, the same difficulties of interpretation remain and others appear. Here the only rule of equilibrium is the equation of marginal cost and marginal revenue. But are the relevant marginal curves those drawn from the short- or the long-run average curves? Probably most economists

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[1] Compare, for example, Joan Robinson, *Economics of Imperfect Competition*, p. 21: 'Complications are introduced into the problem of the individual demand curve by the existence of advertising, but these have been ignored'; and, on the same page: 'In an industry which is conducted in conditions of imperfect competition a certain difficulty arises from the fact that the individual demand curve for the product of each of the firms comprising it will depend to some extent upon the price policy of the others. . . . In drawing up the demand curve for any one firm, however, it is possible to take this effect into account. The demand curve for the individual firm may be conceived to show the full effect upon the sales of that firm which results from any change in the price which it charges, whether it causes a change in the prices charged by the others or not. It is not to our purpose to consider this question in detail.'

would say that it was short-run marginal cost which the entrepreneur would consider in deciding how much to produce with given plant, and that long-run marginal cost would be relevant only when he was considering the desirability of expanding or contracting the plant. Probably they would ignore altogether the very important distinction between short- and long-run demand curves, because it has long been customary to assume in analysis that demand conditions, in some sense, remain constant over time. The fact that demand in the future depends upon present as well as future prices, which makes it impossible to derive marginal revenue from any single demand curve, is usually dismissed, if it is considered at all, with a brief reference to 'maintaining goodwill' or 'spoiling the market'.

It has become customary in recent years to distinguish various 'conditions' in which firms produce on the basis of the nature of the markets in which they sell. The following classification, which is chiefly based on Professor Chamberlin's, appears to the authors to be exhaustive.[1]

(1) Pure competition, in which no single producer can significantly affect the market price by varying his output.

(2) Pure monopoly, in which the demand curve of the firm is negatively inclined, and in which, because there are no close substitutes, the entrepreneur assumes that a change in his price or output will cause no other producer to change his.

(3) Monopolistic competition, or 'polypoly', in which the demand curve of the firm is also negatively inclined, because its product is differentiated from others, and in which the entrepreneur assumes that his demand curve is independent of the reactions of other producers, not, as in the case of monopoly, because there are no close substitutes, but because there are so many competitors within his 'group' that no *one* is affected to a significant extent by a change in his price or output.

(4) Oligopoly (including, as a special case, duopoly), in which a few firms produce an identical product, and each realizes that a change in its price or output may induce a change in the price or output of one or more competitors.

(5) 'Monopolistic competition with oligopoly', or 'monopolistic

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[1] The definition of monopoly does not correspond to Professor Chamberlin's. (See Table 9, p. 30, in which the firms interviewed have been arranged according to our classification.)

competition in the small group', which is like polypoly in that the product is differentiated, but like oligopoly in that the producer does not assume that his competitors' price policy is independent of his own.

In technical terms a monopolist (or a monopolistic competitor) is distinguished from an oligopolist by the fact that the cross elasticity of demand between his product and the product of any other one firm is negligible, and his own demand curve therefore 'determinate'. If any cross elasticities between his and other firms' products were not negligible, he ought to take into account the possible reactions of these other firms to any change in his own price, and the situation would thus be oligopolistic.

There are two factors which, if present, tend to make these cross elasticities small. One is the smallness of the proportion of consumers[1] (or potential consumers) for whom the elasticity of substitution is high between the firm's product and *any* other, a condition which will tend to make the firm's demand curve inelastic. For the smaller the number of consumers who transfer their allegiance after any change in price, the less likely is any one other firm to find its demand significantly affected. The second factor is the range and evenness of 'scatter' of the affected consumers among the products of other firms. There are two cases in which the range of scatter would be great and the distribution even:

(*a*) That of monopoly. Here there is only one firm in the 'group' or 'industry'. If its price is raised it will lose some customers, but, there being no close substitutes (in the ordinary sense), the customers who desert are likely to choose such varying alternative ways of spending their income that no single firm's demand will be affected to a significant extent.

(*b*) That of monopolistic competition. Here there are many competitors in the 'group', and in general the elasticities of substitution between any firm's product and those of some other firms in the group are high for a significant proportion of that firm's consumers. If it raises its price, the customers it loses will, for the most part, choose alternative products within the group. But because there are many such products, and because the preferences of consumers are fairly evenly divided among them, the number gained by any particular firm is likely to be negligible.

[1] Properly weighted, of course, by the number of purchases each makes.

With these definitions it is clear that there can be border-line cases between monopoly and monopolistic competition with determinate demand curves. The 'group' is a vague and unsatisfactory division, and can only be defined in terms of the high elasticities of substitution among products of 'many' or 'typical' consumers. In general, the smaller the proportion of consumers for whom elasticities of substitution are high between products of firms operating in the 'group', the smaller can be the number of firms within the group consistent with determinate demand curves. The evidence of the interviews suggests that in the case of certain luxury and fashion goods it is possible for cross elasticities to be negligible, and competitors' reactions to be ignored, despite the fact that only a very few firms are operating within the 'group' or industry as ordinarily conceived.[1]

The 'current doctrine' of the equilibrium of the firm, which runs in terms of marginal cost and marginal revenue, is held to apply in its simpler form only to the first three of the categories in our classification, i.e. to pure competition, pure monopoly, and monopolistic competition. It breaks down in the remaining two, i.e. oligopoly and monopolistic competition with oligopoly; these, as special cases, are relegated to footnotes or left to mathematicians, because the demand curve for the product of the individual firm, and therefore marginal revenue, is indeterminate where the price and output policies of the firms are interdependent. Attempts have been made to solve the problem of equilibrium in these last two cases by complicated variations of the simpler rule, but no one attempt has met with sufficient approval to be considered a part of current doctrine.

Subconsciously, when dealing with other problems and when teaching, most economists probably consider the case of oligopoly to be exceptional, and assume the general relevance of the simple analysis in terms of marginal cost and marginal revenue. They assume that the elasticity of demand for the product of the firm is a good measure of the 'degree of monopoly', that production is carried to the point where this elasticity is equal to the ratio[2] $\dfrac{\text{price}}{\text{price}-\text{marginal cost}}$, that if the elasticity is less than this ratio, price is raised, if more than this

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[1] The authors intend to develop the implications of the classification in a subsequent article.

[2] Since this will be the point where marginal cost will equal marginal revenue.

ratio, price is reduced.[1]  They assume that each factor is hired up
to the point where its marginal product is equal to its wage or,
more generally, where its marginal cost (dependent on its elasticity
of supply) is equal to its marginal revenue (dependent on the elas-
ticity of demand for its product).[2]

For the above analysis to be applicable it is necessary that entre-
preneurs should in fact: (a) make some estimate (even if implicitly)
of the elasticity and position of their demand curves, and (b) attempt
to equate estimated marginal revenue and estimated marginal cost.
We tried, with very little success, to get from the entrepreneurs whom
we saw, information about elasticity of demand and about the rela-
tion between price and marginal cost. Most of our informants were
vague about anything so precise as elasticity, and since most of them
produce a wide variety of products we did not know how much to
rely on illustrative figures of cost. In addition, many, perhaps most,
apparently make no effort, even implicitly, to estimate elasticities of
demand or marginal (as opposed to average prime) cost; and of those
who do, the majority considered the information of little or no rele-
vance to the pricing process save perhaps in very exceptional
conditions.

## 3. The 'full cost' policy

The most striking feature of the answers was the number of firms
which apparently do not aim, in their pricing policy, at what ap-
peared to us to be the maximization of profits by the equation of
marginal revenue and marginal cost. In a few cases this can be ex-
plained by the fact that the entrepreneurs are thinking of long-run
profits, and in terms of long-run demand and cost curves, even in
the short run, rather than of immediate profits. This is expressed
to some extent by the phrase commonly used in describing their
policy—'taking goodwill into account'. But the larger part of the
explanation, we think, is that they are thinking in altogether
different terms; that in pricing they try to apply a rule of thumb
which we shall call 'full cost', and that maximum profits, if they

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[1] See, for example, Joan Robinson, *Economics of Imperfect Competition*, passim;
R. F. Harrod, *The Trade Cycle*, chaps. i and ii; and A. P. Lerner, 'Monopoly and
the Measurement of Monopoly Power', *The Review of Economic Studies*, vol. i,
no. 3.

[2] See, for example, J. M. Keynes, *The General Theory of Employment, Interest and
Money*, p. 5 and passim; A. C. Pigou, *The Economics of Welfare* and *The Theory of
Unemployment*; and J. E. Meade, *Introduction to Economic Analysis and Policy*.

result at all from the application of this rule, do so as an accidental (or possibly evolutionary) by-product.

An overwhelming majority of the entrepreneurs thought that a price based on full average cost (including a conventional allowance for profit) was the 'right' price, the one which 'ought' to be charged.[1] In some cases this meant computing the full cost of a 'given' commodity, and charging a price equal to cost. In others it meant working from some traditional or convenient price, which had been proved acceptable to consumers, and adjusting the quality of the article until its full cost equalled the 'given' price. A large majority of the entrepreneurs explained that they did actually charge the 'full cost' price, a few admitting that they might charge more in periods of exceptionally high demand, and a greater number that they might charge less in periods of exceptionally depressed demand. What, then, was the effect of 'competition'? In the main it seemed to be to induce firms to modify the margin for profits which could be added to direct costs and overheads so that approximately the same prices for similar products would rule within the 'group' of competing producers. One common procedure was the setting of a price by a strong firm at its own full cost level, and the acceptance of this price by other firms in the 'group'; another was the reaching of a price by what was in effect an agreement, though an unconscious one, in which all the firms in the group, acting on the same principle of 'full cost', sought independently to reach a similar result.[2]

The formula used by the different firms in computing 'full cost' differs in detail, as will be seen by referring to the information in column B in the chart of evidence; but the procedure can be not unfairly generalized as follows: prime (or 'direct') cost per unit is taken as the base, a percentage addition is made to cover overheads (or 'oncost', or 'indirect' cost), and a further conventional addition (frequently 10 per cent.) is made for profit. Selling costs commonly and interest on capital rarely are included in overheads; when not so included they are allowed for in the addition for profits.

It would be useful for economic analysis if the magnitude of 'full cost' in any case could be deduced from the technical conditions of

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[1] For a classification of firms according to the strictness with which they adhered to the 'full cost' policy see Tables 6, 7, and 8, pp. 26 and 29.

[2] In several cases trade associations published 'standard' figures of costs in an attempt to secure equal prices; firms in the industry were urged to use the 'standard' costs in applying the full cost principle.

production and the supply prices of the factors. This is in fact impossible, for four reasons. The first is that the firm is not necessarily of 'optimum' or of any other size, so that the extent to which internal economies or diseconomies are reflected in the figures depends upon historical accident.[1] The second is that the addition for overheads varies according to the policy adopted for calculating the output over which total overheads will be distributed. As Table 1 shows, somewhat more than half the firms used figures of actual or estimated output, the others (including, in general, the more competitive firms) full or conventionally 'full' output. The third is that the conventional addition for profit varies from firm to firm and even within firms for different products.[2] The fourth is that selling costs, which depend upon the demand, are included.[3]

TABLE 1

*Output assumed for Distribution of Overheads*

(Firms classified according to strictness of adherence to full cost principle.)

|  | Conventional or full | Actual or forecast | Ambiguous or no information |
|---|---|---|---|
| Not adhering | .. | .. | 8 |
| Rigidly adhering | 4 | 7 | 1 |
| Normally adhering | 5 | 6 | 4 |
| Adhering in principle | 1 | 2 | .. |
| Total | 10 | 15 | 13 |

Why do entrepreneurs base price on 'full cost', as defined, rather than attempt to equate marginal cost and marginal revenue? The information relevant to this question given by the thirty entrepreneurs adhering to the full-cost policy is paraphrased in column C in the Appendix and is tabulated in Tables 2–5.

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[1] The information on the slope of the cost curve at the point of equilibrium will be found in column E in the Appendix. In many cases it is inadequate because the question was frequently not asked. Thirteen firms were apparently operating under conditions of decreasing costs and four under conditions of constant cost. Two firms stated that costs were increasing because labour became more expensive as output was expanded; but it was not clear whether the diseconomy in question was an internal or an external one.

[2] This allowance, when given, is stated in column B in the Appendix.

[3] Information about the magnitude of selling costs, when given, will be found in column E in the Appendix.

REASONS FOR ADHERING TO FULL-COST PRINCIPLE[1]

TABLE 2

*General*

| Belief that this is the 'right' price | . | . | . | . | 5[2] |
|---|---|---|---|---|---|
| Loyalty to Association . | . | . | . | . | 2 |
| Experience proved its advisability . | . | . | . | . | 2 |

TABLE 3

*Reasons for not charging more than Full Cost*

| Fear of competitors or potential competitors (including belief that others would not follow an increase) . . | 11 plus 6 of the 7 textile firms. |
|---|---|
| They do not go in for a high profit . . . . | 2 |
| They prefer a large turnover . . . . . | 2 |
| Buyers technically informed regarding costs . . | 3 |

TABLE 4

*Reasons for not charging less than Full Cost*

| Demand unresponsive to price | . | . | . | . | . | 9 |
|---|---|---|---|---|---|---|
| Competitors would follow cuts | . | . | . | . | . | 11 |
| Difficult to raise prices once lowered | . | . | . | . | 2 |
| Trade Association minimum prices | . | . | . | . | 3 |
| Convention with competitors | . | . | . | . | . | 1 |
| Quasi-moral objections to selling below cost | . | . | . | 8 |
| Price cuts not passed on by retailers | . | . | . | . | 1 |

TABLE 5

*Reasons for not changing Prices (however fixed) once settled*

| Conventional price in minds of buyers | . | . | . | . | 5 |
|---|---|---|---|---|---|
| Price changes disliked by buyers | . | . | . | . | 4 |
| Disinclination to disturb stability of market prices | . | . | 3 |

A study of the replies confirms the existence of a strong tradition, already referred to, that price 'ought' to equal full cost. This tradition is accounted for to some extent by an idea of fairness to competitors and is undoubtedly one of the reasons for the adherence to the full cost policy. The other factors which seem to be most important

[1] Little significance can be attached to the actual numbers in each category, since in most cases only those reasons volunteered by the entrepreneurs are included. Thus the fact that only three mentioned the technical information of buyers as a reason for not charging more than cost does not mean that in the other twenty-seven cases this reason was not operative.

[2] This is exclusive of the two in Table 3 who 'do not go in for a high profit', the eight in Table 4 who had quasi-moral objections to selling below cost, and the three in Table 5 who are disinclined to disturb stability.

in inducing entrepreneurs to follow this policy may be summarized under six heads.

(i) Producers cannot know their demand or marginal revenue curves, and this for two reasons: (a) they do not know consumers' preferences; (b) most producers are oligopolists, and do not know what the reactions of their competitors would be to a change in price.

(ii) Although producers do not know what their competitors would do if they cut prices, they fear that they would also cut.

(iii) Although they do not know what competitors would do if they raised prices, they fear that they would not raise them at all or as much.

(iv) Prices are not lowered by actual or tacit agreement among producers because of the conviction that the elasticity of demand for the group of products is insufficient to make this course pay.[1]

(v) If prices are in the neighbourhood of full cost, they are not raised by actual or tacit agreement because it is thought that, while this would pay in the short run, it would lead to an undermining of the firms by new entrants in the long run.[2]

(vi) Changes in price are frequently very costly, a nuisance to salesmen, and are disliked by merchants and consumers. Several entrepreneurs referred explicitly to the fact that there are conventional prices to which customers are attached, and that these have to be charged, which means that in these cases only large changes in price which are clearly unprofitable are possible.

All these reasons militate against changing price from the conventional level. In addition, (i) is a reason for not adopting the alternative price policy of equating marginal cost to marginal revenue; (vi) makes it undesirable and almost impossible to equate short-run marginal cost and marginal revenue; and (v) is a reason for the conventional price level being no higher than 'full cost' including a 'reasonable' addition for profit—a tendency reinforced by tradition.

If it is desired to illustrate the position of equilibrium geometrically, this may be done for the typical case where oligopoly elements are present by the use of a kinked demand curve, the kink occurring

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[1] In this they are, in most cases, certainly right, since the elasticity of demand for the products of the group as a whole is less than that for the product of any one firm.

[2] If prices are below what entrepreneurs consider the full cost level they will be raised by agreement provided that it is possible to secure one.

at the point where the price, fixed on the 'full-cost' principle, actually stands. Above this point the curve is elastic, because an increase in price will not be followed (or so it is feared) by competitors, who will be glad to take any extra sales. Below the point the demand is much less elastic because a reduction in the price charged will be followed eventually by competitors who would otherwise lose business. If
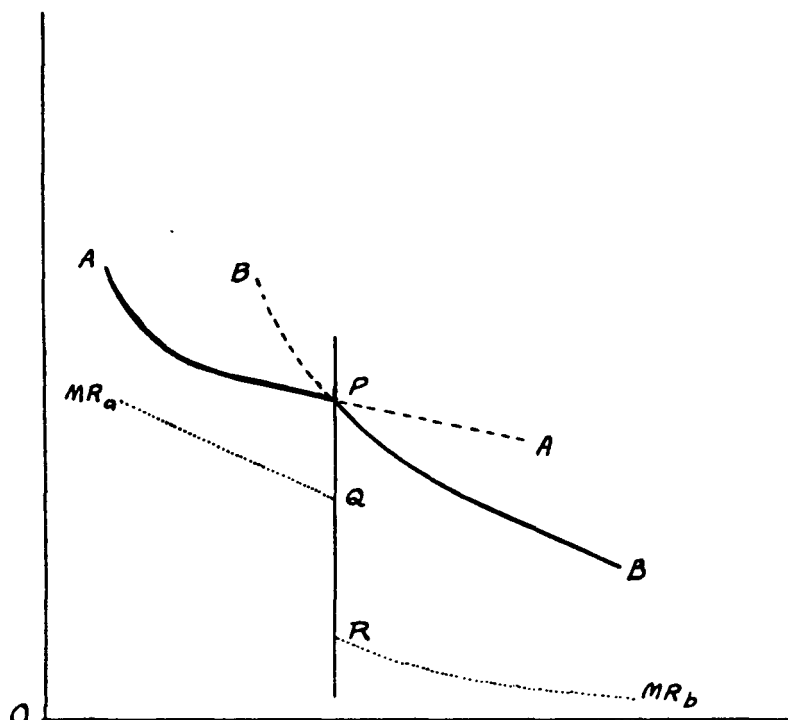


FIG. 1.

this is the character of the demand curve it follows that over a wide range of marginal costs the existing price is the most profitable. It also follows that, with given costs, this price is most profitable over a wide range of possible fluctuations of the demand curve, since wherever the demand curve may be the kink will occur at the same price.

The two diagrams (Figs. 1 and 2) are intended to help the reader to grasp one point in the argument; like all diagrams, they are much more precise than the circumstances they purport to explain.

In Fig. 1 $AA$ represents the demand curve for the product of one firm of the 'group' if all other firms maintain their prices at $P$:

*BB* represents the demand for the product of the firm if all other firms vary their prices as it does, this being a proportionate share of the market demand.

If competitors are forced to cut prices below *P* when any firm begins such a movement, but do not raise their prices above this point if only one firm does so, then it is very likely to pay any firm
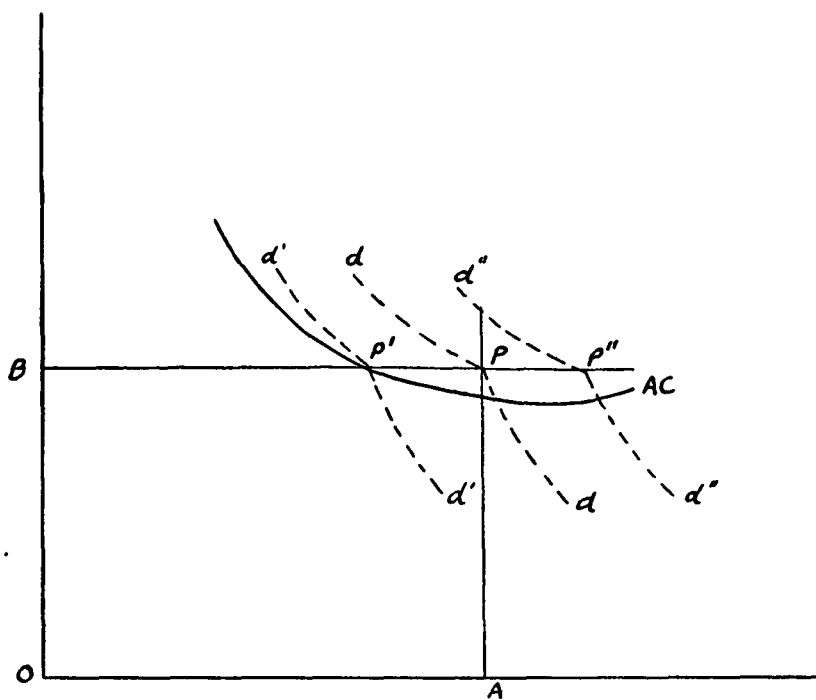


FIG. 2.

to maintain price at *P*. For its own demand curve will have the shape of the heavy line, kinked at *P*. If $MR_a$ is the marginal revenue curve to the curve *AP*, and $MR_b$ the marginal revenue curve to the curve *PB*, then the marginal revenue to any firm is discontinuous below the point *P*. And as long as the marginal cost of the firm intersects the line *PQR* at any point between *Q* and *R*, *P* must be the most profitable point and price therefore stable.

If the demand curves shift, but the kink remains at the same price, there will still be a range between the two marginal revenue curves on the perpendicular below the actual position of *P*: and price will be stable for a wide range of marginal costs.

In Fig. 2 let *AC* represent a section of the short-run average cost curve for a firm, excluding profits. If the firm assumes that it will sell an output *OA*, and adds 10 per cent. of its average cost at that point for profit, it will set the price at *OB*, and be willing to sell, in the first instance, whatever is demanded at that price. If other firms act in the same way, the price will be stable for the reason explained in connexion with Fig. 1. The curves *d'd'*, *d d*, and *d"d"* represent various positions which may be actually taken by the demand curve: only at *P* are the profits which are made those which were expected, but the price will not be changed for the other positions. Any circumstance which lowers or raises the average cost curves of all firms by similar amounts, on the other hand, e.g. a change in factor prices, is likely to lead to a re-evaluation of the 'full cost' price *OB*.

If the demand curve shifts much to the left of *d'd'* and remains there for some time, the price is likely to be cut in the hope of maintaining output. The reason for this cannot be explained geometrically except in the special circumstances where the lower part of the demand curve becomes much more elastic when it moves to the left or where marginal costs fall considerably as output is reduced. Usually one entrepreneur is overcome by panic: 'there is always one fool who cuts'; and the rest must follow. If the demand curve shifts much to the right of *d"d"* the price is likely to be reduced in the long run, because the long-run average cost curve is likely to be falling and entrepreneurs fear that the high profits will induce competition. (In Fig. 2 the long-run average cost curve would lie below the short-run curve *AC* on either side of the point below *P*.)

## 4. Extent and strictness of adherence to 'full cost' policy

From so small a sample it is difficult to generalize concerning the strictness with which firms adhere to the full cost policy, but an examination of the answers summarized in the Appendix, pp. 33–45, and of Tables 6, 7, and 8, indicates that it is the rule rather than the exception to attempt to do so.

Of the 38 firms which we investigated, 12 maintained that they adhered to the 'full cost' policy, with negligible exceptions,[1] at all times and in all circumstances. Of the remainder, 15 adhered to it in normal times, most times being 'normal' in this sense. In addition

[1] Selling below cost on 'loss leaders', shading prices on one line and making it up on another, and cutting slightly on large orders have not been considered inconsistent with 'rigid' adherence.

TABLE 6

*Degree of Adherence to Full Cost Principle (Classified according to Types of Market)*

|  | Not adhering | Adhering rigidly | Adhering normally | Adhering in principle |
|---|---|---|---|---|
| Monopoly . . . . | 1 | 2 | 1 | .. |
| Oligopoly . . . . | 1 | .. | 3 | .. |
| Monopolistic competition . | 3 | 5 | 2 | 1 |
| Monopolistic competition with oligopoly . . | 3 | 5 | 9 | 2 |
| Total . . . | 8 | 12 | 15 | 3 |

TABLE 7

*Adherence to Full Cost Principle (Classified according to Types of Product)*

|  | Not adhering | Adhering rigidly | Adhering normally | Adhering in principle |
|---|---|---|---|---|
| Consumers' goods . . | 4 | 4 | 7 | .. |
| Textiles . . . . | 1 | 2 | 1 | 3 |
| Intermediate goods . . | 1 | 3 | .. | .. |
| Capital goods . . . | 1 | 3 | 3 | .. |
| Retailers . . . . | 1 | .. | 2 | .. |
| Builders . . . . | .. | .. | 2 | .. |
| Total . . . . | 8 | 12 | 15 | 3 |

3 firms (all in textiles) professed to adhere 'in principle', but not in fact because of the severe and chronic depression in the trade. Of these 18 firms adhering normally or 'in principle', 12 said that if business were very depressed they would cut prices below full cost, and 6 of these expressed a reluctant willingness to cut all the way to prime cost if that proved necessary to 'keep going'.[1]  Only 2 of the 30 firms adhering said that they would charge more than full cost in

[1] These cases of cutting to prime cost present a difficulty for the analysis in terms of marginal cost and marginal revenue as well as for that in terms of full cost, since none of the firms had a perfectly elastic demand curve. The explanation in all six cases is that the producers are working to contract—most are contractors and capital goods manufacturers—which means that each unit produced is unique. This allows price discrimination and makes price and marginal revenue identical.

exceptionally prosperous times when they were having difficulty in filling orders, and it is doubtful whether even these two would charge in such circumstances as much as the market would bear in the short run: rationing by refusing to take orders or to fill them promptly was preferred to 'excessive' prices.

The behaviour of a certain number of firms is clearly not explicable in terms of full cost, and in the Appendix these have been omitted from the table and discussed separately on pp. 43–5. One seems to be a monopolist who behaves more or less in the text-book manner. Four had deliberately cut prices in fairly normal times because they estimated (explicitly in three cases) that the demand was elastic enough to make this course pay.[1]

## 5. Stability and instability

We may distinguish two main cases, which we shall call those of price stability and instability, since the terms equilibrium and disequilibrium have a connotation too precise to be warranted here. The distinction corresponds fairly closely to that made by some economists recently between non-aggressive and aggressive price policies.[2]

(i) In cases of relative stability each firm adheres as closely as it is able to its own formula. Where costs do not differ widely within an industry all firms will charge similar prices, and the consumers will be distributed among them according to the factors which make the market imperfect, such as the proximity or attachment of customers to particular firms. The price may be set by the strongest firm, or by a process of trial and error with all firms making some adjustments; in any case it is unlikely to pay small or new firms to make such departures from it as to call attention to themselves. We cannot say precisely what this price will be, for reasons already explained; if it is set anywhere over a fairly wide range it will have a tendency to stay there. The nearest that we can get to an exact statement is that the price ruling where these conditions obtain is likely to approximate to the full cost of the representative firm; and that this price is reached directly through the community of outlook of business men, rather than indirectly through each firm working at what its most profitable

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[1] Two firms in the 'full cost' group said that they would cut prices in the (rare) cases in which they thought demand sufficiently elastic.

[2] See, for example, J. M. Cassels, 'Excess Capacity and Monopolistic Competition', *Quarterly Journal of Economics*, May 1937.

output would be if competitors' reactions are neglected, and if the play of competition then varied the number of firms.[1]

The occasions on which prices stabilized at the full cost level will be changed have been summarized in column D of the table in the Appendix and in Table 8. A change in price may or may not upset 'stability' in our sense. The price is likely to be changed without a departure from price stability if there is a change in costs which will affect all firms together, such as a change in wages or the price of materials, or if a new process is generally adopted; in these cases the idea of the right price will change and with it the price itself. From this point of view there may be something to be said for business men who assert that income-tax is added to price, since if all competitors in any trade regarded it as a cost it would tend to become one.

If demand shifts, prices may be allowed to deviate from full cost without disturbing stability. As trade conditions deteriorate, for example in a slump, full cost, where this is computed by distributing overheads over actual or estimated output, will often be allowed to rise above price. This tendency is strengthened by the anxiety to keep plant running as full as possible, giving rise to a general feeling in favour of price concessions. This may pass into a condition of price cutting, and the industry is then in a position of 'instability'.

(ii) Prices in an industry become 'unstable' as soon as any of the competitors form an idea of a profitable price which is markedly different from the existing prices. From our inquiries this seems most likely to happen when a trade becomes really depressed, and is a potent factor making for an agreement which will substitute a formal arrangement for what was previously only a sense of fitness. Conversely, it may happen when orders increase to the point where existing firms have difficulty in filling them.[2] Otherwise, it seems most likely to happen when there is a new entrant who is determined to establish himself on a large scale, perhaps because of the cupidity or inefficiency of the existing producers; or when one competitor thinks he has a method in advance of those of his competitors; or (more rarely) when one of the participants begins to act on the

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[1] The variation in the number of firms may still serve the purpose of tending to equate the rate of profits on capital to the normal level. Thus, if a 'normal rate' of profits of 10 per cent. on turnover represents an abnormally high rate on capital, the entry of new firms may reduce it, without affecting price, by increasing 'excess capacity'.

[2] This circumstance will remove the kink in the demand curve and make its elasticity above the old price similar to its elasticity below it.

assumptions of competition in text-books. The price then becomes 'what the market will bear', and the size and number of units in the industry and its methods of production are likely to be changed.

TABLE 8

*Occasions on which a Departure from Full Cost Principle might be made*

(a) *Price reductions:*

| | |
|---|---|
| Depressed Trade . . . . . . . | 6 |
| Cyclically on competitive lines . . . . | 2 |
| When necessary to 'keep going' . . . . | 4 |
| Necessity to follow a competitive price . . . | 8 |
| If competitor broke agreement . . . . . | 1 |
| Loss leaders . . . . . . . . | 2 |
| Attempt to capture new markets . . . . | 2 |
| To obtain a large contract . . . . . | 3 |
| Seasonally to stimulate sales . . . . . | 2 |
| To clear old stock . . . . . . . | 1 |
| Cases where demand was elastic . . . . | 2 |

(b) *Price increases:*

| | |
|---|---|
| In specialities . . . . . . . . | 1 |
| To maintain unemployment . . . . . | 1 |
| More work not wanted . . . . . . | 1 |
| Need for funds for expansion . . . . . | 1 |
| On expensive lines, to cover concessions on cheap ones . | 1 |

## 6. Comparison of full cost analysis with current doctrine

The modification of conventional theory which the answers require may be discussed under two heads: (i) modifications in long-run analysis; (ii) modifications in short-run analysis.

(i) In general: the answers as summarized in Table 9 suggest that pure competition, pure oligopoly, and pure monopoly (in the sense defined above) are rarely found in the real business world. Monopolistic competition *is* more common, but the typical case is that of monopolistic competition with an admixture, which is usually large, of oligopoly. The answers indicate, moreover, that while Professor Chamberlin's analysis of price determination in this typical case is correct in the sense that he has probably defined correctly the limits within which price must lie, the process of its determination within these limits is more straightforward and the resulting price more stable than he implies.[1] These limits may be described as (1) the

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[1] E. H. Chamberlin, *The Theory of Monopolistic Competition*, pp. 100–4. Professor Chamberlin's *DD'* and *dd'* demand curves (see, e.g., pp. 90–1) are drawn on the same assumptions as our illustrative curves *BB* and *AA* on Fig. 1, p. 23.

polypoly price (i.e. the one which would be established if entrepreneurs assumed that no other firm would change prices in response to an original change), and (2) the price which would be established if the industry as a whole acted as a monopolist. Average cost (including normal profits) will be equal to price in the long run where there is 'free entry', a condition unlikely to be fulfilled if the oligopoly element is at all important.

TABLE 9

| | Monopoly | Oligopoly | Monopolistic competition[1] | Monopolistic competition with oligopoly |
|---|---|---|---|---|
| Consumers' goods . | 1 | .. | 6 | 8 |
| Textiles     .     . | .. | .. | 3 | 4 |
| Intermediate pro-ducts     .     . | .. | .. | 1 | 3 |
| Capital goods     . | 3 | 2 | .. | 2 |
| Retailers     .     . | .. | .. | 1 | 2 |
| Builders     .     . | .. | 2 | .. | .. |
| Totals     .     . | 4 | 4 | 11 | 19 |

But in the actual cases here examined the precise method by which this result is attained, and by which price is fixed between the limits, is not what a reader of Professor Chamberlin's book would infer. In most cases no attempt is made to estimate marginal revenue from either short period or long period demand curves, nor to estimate marginal costs. The height of price (between the two limits) is determined on the 'full cost' principle, conditioned by such historical accidents as (a) the size and efficiency of the firms in the industry at the time price stability was achieved, and (b) the extent of their optimism and of their fear of potential competitors as measured by the percentage addition for profits. Once this price has been fixed price competition, except in highly abnormal circumstances, ceases. Profits are reduced to normal, if at all, by an influx of firms which raises costs by reducing output per firm (increasing 'excess capacity') or by competition in quality and marketing.

The answers also suggest that the distinction between monopoly and monopolistic competition on the one ·hand and monopolistic

[1] Some of the firms listed as monopolistic competitive were on the border-line between monopolistic competition and monopoly. See p. 17.

competition with an admixture of oligopoly elements on the other is not of very great importance. Only where oligopoly elements are present is the demand curve 'indeterminate' in the economist's sense, but in the other cases it is unknown to the entrepreneur, and this seems to be the essential point. It is true that in the case of monopoly or monopolistic competition the possibility of finding his demand curve by experimenting is open to the entrepreneur; but there are objections to experimentation, and the prospect of a quiet life seems in many cases to have the greater appeal. Entrepreneurs seem to be somewhat less likely to fix prices on the full cost principle where the demand curve is determinate, but there are some who do so.

It proved to be extremely difficult in practice to distinguish between oligopolistic firms and others. The distinction seems to be almost entirely one of degree, for all firms were conscious to some extent of the presence of competitors and the possibility of reactions to changes in their price and output policy. In some cases the distinction seems to rest upon the size of the price or output change under consideration. While a small change, which stole few customers from others, would be overlooked, a large change would lead to retaliation of some sort. In other cases the distinction seems to depend upon the size of the firm considered. In the same market some firms—normally the smaller ones—would apparently not attach much weight to possible retaliation by competitors whereas others —the larger ones—would. In the classification of firms in the Appendix those which seemed to be little influenced by the possible reactions of competitors to small changes in prices have been included as monopolistic or monopolistically competitive. The test applied is whether the firm is sufficiently independent for a Marshallian demand curve to be drawn which, in the neighbourhood of the actual price, would, in conjunction with the cost curves, form a reasonably accurate guide to the most profitable price policy.

(ii) The answers do not confirm the common analysis of short-run equilibrium in terms of marginal cost and marginal revenue. It seems to be much more nearly true (in the case of manufactured, and particularly of finished products) that, save in very exceptional conditions when the attachment of producers to the conventional price breaks down, the long-run analysis of price, as given above, applies in the short run. This does not mean that there will be no tendency for the prices of these goods to fall in depressions and rise

in booms, but simply that there will be no tendency for them to fall or rise more than the wage and raw material costs.

These considerations seem to vitiate any attempts to analyse normal entrepreneurial behaviour in the short period in terms of marginal curves. They also make it impossible to assume that wages in the short run will bear any close relation to the marginal product (or marginal revenue) of the labour employed.[1] Perhaps the most important consequences are for the analysis of the trade cycle[2] and especially of the effects of changes in money wage-rates, in which the assumption is ordinarily made that employment is carried either to the point where the marginal product is equal to the wage-rate, or 'if conditions of imperfect competition prevail', to the point where the marginal revenue (computed from the elasticity of the demand curve) is equal to the wage-rate. Certainly great doubt is cast on the general applicability of a theory which places any weight on changes in the elasticity of demand in the short run as a factor influencing the price policy of entrepreneurs.[3]

## 7. Recapitulation

If our sample is at all representative of business conditions, we suggest that the following conclusions may be drawn:

(i) A large proportion of businesses make no attempt to equate marginal revenue and marginal cost in the sense in which economists have asserted that this is typical behaviour.

(ii) An element of oligopoly is extremely common in markets for manufactured products; most businesses take into account in their pricing the probable reaction of competitors and potential competitors to their prices.

(iii) Where this element of oligopoly is present, and in many cases where it is absent, there is a strong tendency among business

[1] The 'Principle of Substitution' is, of course, not invalidated. The ratio $\dfrac{\text{marginal cost of factor}}{\text{marginal product of factor}}$ will tend to be the same for all factors.

[2] The authors intend to produce an article on this subject in the near future. They suggest that the price policy here outlined partly explains J. T. Dunlop's statistics in the *Economic Journal*, Sept. 1938, which indicate that real wages tend to vary directly with output during the course of the trade cycle.

[3] The 'law of diminishing elasticity of demand' may be a partial explanation of the price-cutting in some depressions which leads to conditions of 'instability'. Several entrepreneurs testified that depressed markets tended to be 'price markets'; i.e. markets in which buyers are particularly sensitive to price changes.

men to fix prices directly at a level which they regard as their 'full cost'.

(iv) Prices so fixed have a tendency to be stable. They will be changed if there is a significant change in wage or raw material costs, but not in response to moderate or temporary shifts in demand.

(v) There is usually some element in the prices ruling at any time which can only be explained in the light of the history of the industry.

## APPENDIX

### *Analysis of Replies to Questionnaire on Costs and Prices*

In the following pages is summarized the information on which the tables in the text are based. This is sometimes rather vague, either because the replies were vague or because, in the case of firms seen in the early stages of the inquiry, the technique of questioning had not been mastered. We began by expecting that the answers would lie along lines different from those which they actually followed, and we did not always press for information which later we should have found of great importance.

The firms have been classed into monopolies, oligopolies, those working in conditions of monopolistic competition, and those working in these conditions with an admixture of oligopoly. The classification has been made by the authors on the basis of all the information available. In the first part of the Appendix the firms which followed what we have called the 'full cost' principle are listed, including those firms which considered that this was the right policy but had difficulty in adhering to it. In the second part the information obtained from the firms which did not adhere to this policy is summarized.

The letter before the number[1] of a firm indicates the type of product:

$a$ = Consumers' goods.
$b$ = Textiles.
$c$ = Intermediate products.
$d$ = Capital goods.
$e$ = Retailers.
$f$ = Builders.

The information under each firm is given in the following order:

A. Price policy.
B. Method of calculating cost.
C. Reasons for adhering to the full cost policy, or to the modification actually employed.
D. Circumstances in which this policy would be departed from.
E. Selling costs: and any information about whether costs to the firm were increasing, constant, or decreasing.

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[1] The numbers do not correspond to those used by J. E. Meade and P. W. S. Andrews in 'Summary of Replies to Questions on Effects of Interest Rates', *Oxford Economic Papers*, No. 1.

| Firm | A — Price Policy | B — Method of calculating cost | C — Reasons for adhering to the full cost policy, or to the modification actually employed. | D — Circumstances in which this policy would be departed from. | E — Selling costs; and any information about whether costs to the firm were increasing, constant, or decreasing. |
|---|---|---|---|---|---|
| | | | **MONOPOLIES** | | |
| d 2 | Price policy defined as 'endeavour to secure a reasonable remuneration'. | No information about cost formula. Overheads proportionate to direct labour. | Cutting prices in periods of depressed trade leads to bankruptcy, so self-preservation supports full cost principle. | | |
| d 4 | Minimum list prices. Trade Association. | These are controlled by costs (? of representative firm). Last year's overheads assumed to be this year's, and divided by current output. | Outside control keeps prices from moving up, association keeps them from going down. | Would keep to list unless evidence of disloyalty. | Selling costs negligible. Costs decrease up to full capacity. |
| d 8 | Prices fixed by cost analysis. Standard reductions for quantity. Trade Association. | Total overheads, excluding selling costs, distributed in proportion to direct labour. Output assumed from current experience. Selling costs spread in proportion to departmental sales. | Association 'genuinely vigilant to guard against exploitation of the consumer'. No advantage taken of inelastic demand. | (Before association was formed.) Though most business men reluctant to start a price war 'always one fool who cuts': then cutting severe in depression. | Selling costs about 20% of total overhead. |
| | | | **OLIGOPOLIES** | | |
| d 3 | Cost is the most important factor. All orders by contract. | Net cost of labour and materials + overhead proportionate to direct labour+10% for profit, if possible. | Demand not responsive to low prices. Buyers too well informed to pay more than full cost+10%, and also danger of foreign competition. | Competition acute in depression, but it is usually hoped to cover overheads. Might go nearly to prime costs to get a special (e.g. introductory) order. | Selling costs negligible. Costs increase, because quality of extra labour is worse. |

| | | | | |
|---|---|---|---|---|
| f 1 | Usually full cost. Mostly contract work. | Total cost + 6 to 10%. Overheads small. | Nearly all costs direct: no explanation why prices not raised, but apparently competition. | Price cutting not important. Big contractors might out in slack times to keep staff. Possibly some price agreements in such periods. |
| f 2 | Usually full cost. Mostly contract work. | Total cost+10%. Overheads very small. | Nearly all costs direct: no explanation of why prices not raised. | Big contractors might make concessions in slack times to keep key men, but most firms close down if they cannot get expected price. |

### FIRMS IN CONDITIONS OF MONOPOLISTIC COMPETITION

| | | | | |
|---|---|---|---|---|
| a 2 | 'The price is determined by (average) cost of production.' Occasionally quality is adjusted to price, to keep to formula. | (Direct costs + overheads) +5% for profits. Overheads based on estimated turnover. | They do not charge more because 'they do not go in for a high profit: they could earn a much higher profit if they chose'. No temptation to cut, as industry expanding. | Price may be reduced seasonally to stimulate sales, or to clear old models. Lower limit is direct costs+overheads. |
| a 4 | Full cost. ('Where demand price is less we do not supply.') | Average overheads computed on basis of a conventional output, assuming normal or fairly good trading conditions. 'The margin added for profit is naturally smaller on competitive lines and higher on specialities and novelties resulting from research in design and technique.' | They are disinclined to cut below full cost because experience has shown that it does not pay. Demand inelastic except on a few lines. A trade association sets minimum prices on a few lines. Price changes a nuisance to agents, and disliked by market. | Depression shifts demand to more popular, competitive, lines. It is their experience that timely reductions in these alone have been successful in increasing revenue. | Salesmen's salaries about 6 to 10%, advertising about 5%, of sales. |

| Firm | A<br>Price Policy. | B<br>Method of calculating cost. | C<br>Reasons for adhering to the full cost policy, or to the modification actually employed. | D<br>Circumstances in which this policy would be departed from. | E<br>Selling costs; and any information about whether costs to the firm were increasing, constant, or decreasing. |
|---|---|---|---|---|---|
| a 7 | Full cost of representative firm. The proper price is equal to full cost, but they cannot get this at present because they are new and small with high costs: they expect to in future. Price agreements in some lines. | Must charge a conventional price, and would equate cost to this if they were normal age and size. Their price a bit higher and quality a bit better than 'the competitive'. General rule (where agreements) is: price to retailer = direct cost×3. They cannot get this at present. | They could not charge more without losing too many orders. They prefer reducing sales to reducing price, and are bound by agreements and conventional prices. Price cuts, in any case, are not passed on by retailers. | Sometimes the conventional price is less than full cost, but must be charged. They charge less now because their costs are too high. They would not cut to direct cost in any circumstances. | Selling expenses about 30%. In trade as a whole about 11–15%. Theirs are high because they are young. Costs decreasing (it was not clear whether this was solely due to selling costs decreasing). |
| b 1 | Full cost ought to be charged, but they could not get the business if they did. | Material cost + weaver's wage + a percentage of this wage to cover overheads, &c. Overheads on basis of past six months. | They believe that while one firm can increase its sales by cuts, it simply steals from others. 'The price element as a determinant of sales has been much exaggerated; merchants do not like to buy in a weak market.' | They have to sell at less than full cost because others are doing so. | Selling costs very small. Greater diversity of cloths produced by each firm has raised costs. |
| b 5 | Full cost. | They start from a conventional price, and produce an article whose full cost equals this price. Overheads taken on basis of full working. The selling department then adds 'something' for selling-costs, risk, and | They do not charge more because they aim at high long-run turnover. They never change a price unless there is a very large change in costs. Retailers dislike changes, particularly reductions, which reduce | They sometimes improve quality when costs (e.g. raw material) fall. They cut in depression on non-proprietary lines because 'competition makes it necessary'. Difficult to estimate elasticity of demand, | (Refused information.) |

| | | | | | |
|---|---|---|---|---|---|
| | | profit. Allowance for risk varies from line to line. | their margins. In any case, there are conventional prices and it would rarely pay to move to next lower or higher. They do not follow cuts by competitors because they sell against market in general. | but not great on most lines. | |
| $b\,7$ | Full cost (nominal). | Price of material + weaver's wage + a percentage of this wage to cover overheads, &c. Fraction varies with cloth, but as a rule $\frac{1}{3}$ to $\frac{2}{3}$. Experience of past 2 or 3 years is basis for output assumed for overheads. | They have a strong belief, which is gaining ground in the industry, that selling below cost does not pay. Can always get business by cutting low enough, but this is too low. | They might accept a little less, but very little and very rarely, where order was large, or merchant's credit very good, or order part of a larger one which showed profit elsewhere. They have had to revise their ideas of what full cost is, and cut their margins. | Selling costs certainly less than 10%. Do not advertise. |
| $d\,5$ | Full cost. Formula changed once in depression, since then new formula practically adhered to. | Old formula: Price = works cost × 2. New formula: Price = works cost × 1·8. Works cost includes overheads in works; these spread evenly. | Experience shows that this formula gives satisfactory results for probable turnover, and increased profits if sales improve. They lead their competitors. | Formula was deliberately reduced in depression in the hope of extending sales, which in fact happened. Slight increase in price as consumers' income improved. | Selling costs 'fairly high'. Costs probably decreasing. |
| $e\,2$ | Cost is initial guide to price. | Manufacturing cost + transport cost + 'reasonable profit' gives wholesale price. This usually doubled to get retail price. | No experience of severe fall in turnover. Long period policy appeared to be to continue expansion. | Price might be reduced if it were thought that demand was elastic enough to make it worth while. Sometimes the price of one article was raised to cover increase in cost of many. | |

## FIRMS WITH MONOPOLISTIC COMPETITION WITH ADMIXTURE OF OLIGOPOLY

| Firm | A<br>Price Policy | B<br>Method of calculating cost | C<br>Reasons for adhering to the full cost policy, or to the modification actually employed. | D<br>Circumstances in which this policy would be departed from. | E<br>Selling costs; and any information about whether costs to the firm were increasing, constant, or decreasing. |
|---|---|---|---|---|---|
| a 6 | Full cost. | Overheads (about 65% of total cost) distributed on the basis of forecast output. There was a range of about 40% between the highest and lowest prices on an article, depending on the size of the order. | Would not raise prices just because he thought market would stand it: would want to 'stand in with rest of trade' in making an advance. When sales fall off, better to go for designers and salesmen than to cut prices. Business community has 'a kind of group instinct leading the business man to aim at covering cost rather than at increasing turnover: the feeling that if you can't get a price that covers cost you would sooner burn the stuff'. | Would cut even below works cost to get a very large contract. There is an instinct to put prices up in a boom because some unemployment is necessary to maintain discipline. | Costs increase in boom (see D). Costs of selling and designing a large proportion of the high overheads mentioned. |
| a 8 | Full cost the normal and usual price. | Overheads computed on basis of forecast output, mainly in light of recent experience. Overheads vary from 60 to 400% of works cost in different lines. Distribution expenses taken as a percentage of selling price. | Frequent changes of price would alienate customers. They look on price cutting as a 'slippery slope'. | They would cut prices if they thought demand sufficiently elastic. This depended on what competitors did; if they followed, it made demand less elastic. The chief reason for price cutting in depression is the necessity of following the small man, whose greatest sales weapon is price. | Selling costs 10–20% of selling price (advertising 1–5%). |

| | | | | | |
|---|---|---|---|---|---|
| a 9 | They produce at prices consumers want and reduce costs to make this possible. | Overhead costs 'calculated precisely'. | They regard themselves as market leaders, and fix prices independently of competitors. | Price policy to some extent based on estimate of consumers' purchasing power. In depression they would make a special effort to reduce prices, but they would hope to get their costs down in the same proportion. This was not considered to be price cutting. | Selling cost, including retail margin, about 33% of retail price. Advertising cost about 6% of selling cost. It appeared from discussion that short-period costs rose and this was a factor limiting rate of expansion. |
| a 10 | In staples, price related to what market will bear. In fancy lines, cost is the basis of price. | Total cost, assuming standard figure of output, mainly based on anticipated sales. Overheads distributed specifically. | Disinclination to sell below full cost universally operative. Reactions of other firms definitely considered; price and profit could be increased if competitors would follow. | No information. Firm assumed that demand was inelastic. | Selling cost 7% of total. Costs decreasing. |
| a 11 | Agreement in some lines. Cost the principal factor. | Works cost + average selling cost + about 5%. Output assumed to be normal. Overheads distributed specifically. | Disinclination to sell below cost, and competitors would follow cuts. Foreign competition limits price where agreement, home competition where no agreement. | There is a temptation to reduce prices in early stages of depression, to maintain turnover. In acute depression, any price contributing to overheads would be worth while. | Selling costs about 9%. Plant about technical optimum. |
| a 13 | Full cost. | $[(\text{Raw material} + \text{wages}) + \text{factory overheads} \times \text{last year's wages} \times \text{wage cost of article}] \times 3/2.$ | Religious conviction plus successful tradition. Demand not responsive to price changes except in low price ranges. | Might occasionally shade prices on cheap lines and add something on more expensive ones to compensate. | Selling costs about 10% of receipts and rising. |

| Firm | A Price Policy. | B Method of calculating cost. | C Reasons for adhering to the full cost policy, or to the modification actually employed. | D Circumstances in which this policy would be departed from. | E Selling costs; and any information about whether costs to the firm were increasing, constant, or decreasing. |
|---|---|---|---|---|---|
| a 14 | In normal conditions and when trade is expanding price is based on average cost. Firm is a price leader. | Direct cost + overheads + a variable percentage (depending on whether the line is standard or ephemeral) for profits. Overheads distributed on actual output, except that where expansion of sales is expected, estimated output may be taken. | They do not charge more 'because experience teaches that if they do, the ground is likely to be cut under their feet by competitors'. They do not charge less because competitors would cut if they did. When trade expanding, wise to charge no more than cost to take advantage of expansion and not attract new-comers. | Price might be less in the case of loss leaders, supported for reasons of prestige. In depression they might cut to (direct cost + full overheads)— 8%. They charge less than full cost when attempting to capture certain foreign markets. | Selling costs 'very high' on proprietary lines: low on bulk lines. |
| a 15 | 'By weighing the competitive position and the cost sheet.' In case of branded goods they must charge same price as the dominant firm (which bases price on full cost). With non-branded goods consumer has no index of quality, and a cost formula can be applied. | Overheads distributed on basis of forecast outputs each year. | Competition prevents him from charging more than rivals on branded lines. Important to discourage other people from coming in. Competitors would react with cuts if any firm made them. | See C. Competition may also force him to charge less than computed costs on bulk lines. | In a typical case, 17½% for advertising and selling, another 4–7% for delivery. |
| b 2 | In specialities, full cost. In bulk lines depression made it impossible to get orders at cost. (b2's addiction to full cost illustrated by his 'proof' that new machines should be installed. Full cost with new machines was much more than prime cost with old, but full cost with old slightly more.) | A conventional capacity assumed for overheads. Never ran a mill at less than 90% capacity. | Although any producer can increase operations to capacity by under-cutting, the enormous difference to net profits per unit made by a small cut restrains this tendency. At the time of interview, an agreement reinforced this restraint. | See under A. | Decline of specialization an important factor in increasing cost. They tried one mill on a single count: efficiency increased from 84 to 96% of estimated capacity. |

| | | | | |
|---|---|---|---|---|
| b 3 | 'In a good market a firm can determine its costs and fix its prices accordingly. In a weak market it is necessary to quote a price which will get the order.' Theirs is now a weak market. | An addition to direct costs made for works overheads and selling costs in turn. Overheads based on forecast output. | They deplore price cuts, because they do not stimulate sales. Others cut as any one firm does, and no elasticity in demand for whole output. | If they charged full cost in the present depressed state of trade they would have to close half their mills in a fortnight. Agreements have existed, but they break down as soon as depression becomes severe. | Selling costs, including designing and office costs, never quite 50% of works costs. |
| b 6 | Full cost. Start with a conventional price and determine what article they can produce at that cost. | Actual output used in assessing overheads, except that when trade is depressed competition makes it impossible as a rule to raise allocation per unit. | They have a very strong disinclination to selling below cost. 'Price cutting a miserable way of doing business', and extra sales would not compensate for loss of revenue. Their rule is to change price as little as possible, because this usually means changes in size or quality, which means loss on stocks and is a nuisance on production side. Upper limit to price set by competition. | They accept some large orders (e.g. from government) at less than cost to keep plant running near capacity. In case of semi-finished goods, the market is nearly perfect, and market price, which fluctuates daily, must be accepted. | |
| c 1 | Cost the principal factor in price. | (Works cost + selling cost) + 6–10% for raw materials. (Works cost + selling cost) + 20–25% for manufactured goods. Overheads distributed evenly on previous year's output. | Competition is keen, and though products are differentiated it would prevent a higher price. Disinclination to sell below cost, but cuts if made would be followed. | Prices reduced if material gets cheaper (i.e. by formula). Apparently not in other circumstances. | Selling costs about 11% of price. Costs decrease slightly. |

| Firm | A<br>Price Policy | B<br>Method of calculating cost | C<br>Reasons for adhering to the full cost policy, or to the modification actually employed. | D<br>Circumstances in which this policy would be departed from. | E<br>Selling costs; and any information about whether costs to the firm were increasing, constant, or decreasing. |
|---|---|---|---|---|---|
| c 2 | Cost is three times as important as what the market will bear. | Materials + labour + overheads + intended profit. Overheads split to departments, then spread 'evenly'. | Prices not raised because this would lose the market. Strong disinclination to sell below cost, and expected that competitors would counter with cuts. | Prices sometimes cut to maintain turnover. Never go below full cost (? excluding profit). | Selling costs small. |
| d 6 | Normally full cost. Agreement in one line. All business is contract. | Works cost + 20% for selling, &c. + 10% for profit. Overheads usually on past year or two, but not if these years had been very bad ones. | Prices not cut to extend sales because competitors would immediately follow with similar cuts. | Full cost might be exceeded with their special lines. A tendency to cut in periods of depressed trade, and perhaps in order to get a particular order. | Costs decreasing. |
| d 7 | Full cost between narrow limits. | (Labour and materials) × 2·2 to 2·3; i.e. assumes that overheads will be covered by this. Actually this gives 10 to 15% profit. | Does not go above this (15%) maximum profit because a wide margin would tempt competitors. Has low costs, and rarely needs to go below 10%. | With a new model, he would go down to prime cost in the knowledge that he would soon get his costs to his formula. Choice of profit depends on current pressure of work. Would cut to keep staff together, increase price if he was short of capital for expansion. | Advertisement negligible, no information on selling costs. In short period, expansion limited by plant. Long-period costs probably decreasing. |
| e 1 | Full cost between limits. Strong traditional ideas as to what price ought to be in some lines. | Material cost + a margin between maximum and minimum limits. Probable turnover assumed for each department. The margin added may vary by about 8% according to speed of turnover and labour costs involved. | They know their price is about the economic minimum, and do not need to go below it. Their long-period policy is to sell at low prices and expand business. But expectation of counter cuts by competitors is always a factor. | Competition makes it necessary to continue to reduce prices and give better quality (i.e. conditions not static). Prices once set would not be changed unless costs changed, except possibly to clear lines not going. | |

The following gives an account of the policies followed by the firms which did not price their products according to any form of the cost principle.

*Firm a 1.* This firm produced fashion goods, and though broadly affected by competition, had almost a monopoly[1] in its own range, The demand for its goods was a peculiar one, the price itself being regarded as one of the properties of the commodity, and sales being often higher at a high price than at a low one. Thus it was necessary to discover the 'right' price, which might not be related to cost at all: cost was the bottom limit of price. Price might be cut in depression, but this must be concealed from the customers. On certain staple, more competitive lines, price might be less than would cover full overheads: partly to maintain full employment, partly because these goods were made to train learners. Overheads about equal to works costs. No agreement in this trade, but firms were all anxious to know what their rivals were doing.

*Firm a 3.* This firm supplies mainly to multiple stores and 'has to take the price as fixed within limits' and work to it. But there is some play of price and this is very important as affecting sales. Overheads taken as 150 per cent. of direct labour, this being added to material and direct labour charges to get full costs. Their selling firm takes their costs, adds 12½ per cent. for its (selling) costs, and what profit it can get. They will go down to direct costs to keep the business going, but it is difficult to raise prices which have been once reduced. They discriminate in prices, according to the season, and for such reasons as bulk orders.

Price reductions stimulate sales, and they produce as cheaply as possible for this reason. There are no agreements, and bad trade leads to a tendency to reduce prices.

Costs fall as turnover increases: it is surprising even to themselves how much.

*Firm a 5.* Described as almost a monopoly, but has to think about the possibility of new entrants to the industry. What the market will bear is the only consideration *any* business takes into account: bottom limit is prime costs. Costing is carefully done, and overheads are distributed on basis of 80 per cent. operation: but in any case, so long as overheads are covered somewhere, it does not matter which line carries them. Prices are liable to vary at short notice with cost of material and with the competitive position. Demand for most of their products is inelastic: with a competitive line, response to cuts is immediate. But a cut may reduce sales, if it leads consumer to suspect quality.

Agreements are the most important factor against competitive cutting and include 'expectation that competitor will counter with cuts'. Even when an agreement has been broken (as tends to happen with any sharp change in trading conditions) you try to keep in touch: you telephone to your competitor and inquire, and if he is cutting you say, 'You get the order, old man, but *do let's get together on the price*' (Apparent discrepancy between these paragraphs: informant may have had different lines in mind.)

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[1] Though this firm has been classified as a monopoly, the fact that the evaluation of its product by consumers was not independent of its price makes the analysis on which the classification was based inapplicable.

Selling costs, including wholesalers' margins, which are considered a selling cost, are about 20 per cent. of works cost.

*Firm a 12.* This firm is a member of a highly competitive industry to which entry is very easy. What the market will bear is much the most important factor in determining price. Any price which will make some contribution towards overheads is better than nothing. Demand is very inelastic for the industry as a whole, and the sales of any particular line depend mainly on whether the style becomes fashionable or not. To *raise* prices has been disastrous.

Agreements with competitors are no good, and though you expect your cuts to be countered, you do not pay much attention to this. The only factors restraining the tendency to cut prices are belief in the inelasticity of demand, and a strong disinclination to cut below direct costs.

Selling expenses about 16 per cent., profit about 4 per cent. of price to wholesalers. Industry working short time, so that costs would fall owing to spreading of overheads.

*Firm b 4.* Until 1929 slump this firm had rarely sold anything below full cost. Since then a more aggressive policy has been followed, both to bring in new lines and to expand old ones. Prices are normally got by adding overheads on a 'full' basis to direct costs, and then adding margins depending on the state of the market, which depends mainly on the degree of differentiation of product which they have achieved. Lower limit of price is direct cost plus 50 per cent. overheads, upper limit is fixed by fear of competition, so that it is higher where they have a specially good article. Competitors always counter with cuts. 'The disinclination to sell below cost is all a matter of how much you must do to keep running on full time.'

Selling and warehousing costs about 10 per cent. of price. Cost falls with increase of output, even when they go into overtime.

*Firm c 3.* 'Price depends mainly on what the market will stand.' Each line is expected to earn a certain margin over prime cost: if it will not do this, it is not produced, because resources could be used more profitably elsewhere. Once a price has been fixed, it is changed as rarely as possible. They regard themselves as market leaders: 'If we feel ourselves compelled to increase or reduce prices, we are fairly certain that our competitors will do likewise. Unless they are prepared to accept a sacrifice in their profit rates, they will have to follow our procedure.' Reasons against raising prices are that it disheartens salesmen, and probably damages long-run competitive position. Competitors would probably follow any cuts, but doubtful if they would follow increases (made apart from changes of cost).

About half their costs are distributional. They think that costs could be reduced if there were a considerably larger demand.

*Firm d 1.* All orders by contract. Agreement in one line. In this line the firm sets the prices at total cost plus 10 per cent. This is its upper limit of price: output is estimated and total overheads allocated in proportion to direct labour. The lower limit is direct costs, which include that part of overheads which varies with output. Price not raised above upper limit because this is found to be unwise with permanent business: buyers technically informed. The price reductions in depression do not have much effect on sales, but have

to be made to retain share of what business there is. Selling costs about 10 per cent of price.

*Firm e 3.* Market highly competitive. Close attention has to be paid to what competitors do, and they must be either led or followed in price movements. Thus very little attention can be paid to costs. No rigid formula is used for computing these: if competitive price is too low, the line is discontinued. Two departments run at a small loss because of advertisement value. There are really no restraining tendencies against price reductions (but as the firm is a retailer, the conditions are those of monopolistic competition).