Price leadership is a concept which economists have used to describe the possible character of price competition in an oligopolistic market situation. The various forms of price leadership were outlined two decades ago by Stigler and Markham. The former defined "dominant price leadership" as existing when one large firm has a large degree of monopoly power such that all other firms in the industry feel obliged to follow its lead in prices. Stigler also defined "barometric price leadership" as the situation where one firm changes prices in a manner which others feel is reasonable in the light of existing market conditions. Markham followed Stigler's lead by making a more detailed analysis of the concept, drawing on contemporary empirical material to illustrate gradations between these two types of price leadership and analysing the pre-conditions for these forms of market conduct to become established.

In a British context the term is now well-known. For example, the Monopolies and Restrictive Practices Commission pointed to leadership by Dunlop in respect of tyre prices as far back as 1955.\footnote{G. J. Stigler, "The Kinky Oligopoly Demand Curve and Rigid Prices", Journal of Political Economy, Vol. 55, No. 5, October 1947, pp. 432-449.}


\footnote{Report on the Supply and Export of Pneumatic Tyres, December 1955. The Monopolies Commission also showed in 1936 that Dunlop was the price leader in the rubber footwear industry. See Report on the Supply of Certain Rubber Footwear, para. 268-275.}

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Nonetheless there has been little detailed description of the phenomenon and, in particular, an examination of various industries to see if they fall neatly into either of the two types suggested by the writers just mentioned. This article attempts such an analysis, drawing on material from a research project studying the effects of the 1956 Restrictive Trade Practices Act.4

The 1956 Restrictive Trade Practices Act

This legislation is the appropriate point at which to introduce an examination of the concept of price leadership. This is because the Act aimed at ending the widespread existence in British industry of collective determination by firms of prices, discounts, etc. Price leadership of either variety just outlined was clearly one way by which stable prices could be maintained in the new competitive environment sought by the Act. From detailed study of eighteen industries it is clear that price competition became acute following the abandonment of price-fixing associations after about 1958 or their striking-down by the Restrictive Practices Court set up under the 1956 Act. For example, price falls of 20% or more occurred in the sanitary ware, mains cables and electric motors industries following the collapse of price rings. Unfavourable verdicts before the Court led to keen competition in the glass bottle and wire rope industries.

The strengthening of price competition after 1958 however gradually became tempered by the realisation on the part of leading firms that it was not in their interests for profit margins to be continually impaired. The adoption and recognition of a price leader was an obvious means by which an industry might achieve more stable market conditions.5

4 The paper is based on research pursued at Loughborough University of Technology led by Professor Dennis Swann. It was based on a three-year project supported by a grant from the Social Science Research Council. The findings will be published as Competition in British Industry by George Allen and Unwin. The author alone is responsible for the opinions in this paper.

5 The late Lord Chandos publicly advocated price leadership in such terms in the Macmillan Lecture to the Institution of Engineers and Shipbuilders in Scotland. See The Times, 11 April 1962; The Economist, 21 April 1962, p. 263.
With this perspective in mind we now enquire to what extent present-day instances of price leadership conform to the models put forward by Stigler and Markham.

**Dominant price leadership**

The nearest approximations to Markham's category of dominant price leadership in the sample are to be found in the electric cables, wire ropes and clay pipe industries. In these industries there was virtual unanimity amongst sources interviewed that British Insulated Callender's Cables Ltd. (BICC), British Ropes Ltd. and Hepworth Ceramic Holdings Ltd. are the instigators of price increases in their respective fields. Other firms in each case together account for less than one-half of total output and invariably issue new price lists after the leader has adjusted prices. The large market share of the three firms just mentioned is clearly of importance in describing them as dominant price leaders. This preponderance in the market reflects the growth of these firms in the later 1950s and early 1960s resulting from the acquisition of competitors. The process of continual takeover of rivals must have considerably facilitated and enhanced the viability of their price leadership. In itself the reduction in the number of firms would increasingly have predisposed remaining small concerns to accept the growing market power of a would-be leader and follow price increases. All three firms have continued in more recent years to take over smaller firms. For example, BICC acquired Armorduct Cable Co. Ltd. in 1964, Pyrotenax two years later and both Reliance-Clifton and Britannic-General in 1968. British Ropes has absorbed R. Hood, Haggie & Son Ltd. and Wrights Ropes Ltd. in recent years. By acquiring Ellistown Pipes in 1968, Vitrified Clay Pipes a year later and Western Pipes in 1970, Hepworth Ceramic now accounts for about 70% of output of clay pipes.

But do these firms really justify the terminology suggested by Markham some twenty years ago? He indicated that the effectiveness of this type of price leadership is dependent on various devices which strongly induce other firms to follow the all-powerful leader. In power cables and wire ropes the strength of the leader is attributed by competitors to its vertically integrated
structure. Electric cable and wire rope makers which do not roll their own rod and draw wire are not able to adopt an independent pricing policy in case they should be deprived of their basic raw material. In the case of clay pipes the few remaining firms clearly feel they would not out-stay the leader if pressure on prices became severe over a prolonged time period. They are thus disinclined to challenge the leader’s determination of prices. There is no doubt that firms in these industries believe that their leader can exercise “discipline” if it chose to do so. They believe that if they began a price war they might not see the end of it.

However, all these three leaders are very far from being immune from competitive pressures. First, there is the natural disinclination on the part of users of relying too heavily on one source of supply. Secondly, non-price dimensions of competition such as delivery dates and product quality, also affect the willingness of buyers in committing business to a dominant firm. Thirdly, and much more important, the leadership in each of these industries is less than complete. BICC, British Ropes and Hepworth Ceramic may be leaders in terms of list prices but sales usually take place at list price less some discount. Only if these price leaders’ discounts off list levels were faithfully followed could they truly merit the description of dominating the market in an overall price sense. Moreover if sales by tender to large purchasers account for an important part of industry output then a further qualification has to be made before use of the term “dominant” is meaningful. One has to assume that somehow or other the leader’s pricing philosophy in tender sales is known and followed by competitors.

A meek acceptance of the leader’s prices by other firms has not invariably been the case in these industries. The periodic occurrence of excess capacity has weakened the willingness of other firms to heed the leader’s determination of prices, particularly in respect of sales to large buyers. Thus the Electricity Area Boards, the major buyers of power cables, experienced keen competition during 1969 at a time when available capacity considerably exceeded the Boards’ requirements. The wire rope industry offers a good example of how large buyers using tender

* Although this is a well-known feature in business pricing many economists in the academic world seem to be unaware of it.
purchasing can experience competition when other users find list prices being similar if not identical. Some port authorities found that prices fell by 25% between 1964 and 1968. The spread in prices widened over this time, i.e., there was no "leadership" downwards but each firm went its own way. There might appear to be dominant leadership of list prices but this is not to imply the absence of competitive pressures. Excess capacity can, as in the clay pipe industry, be a potent cause of keen competition in respect of discounts. Thus the chairman of Hepworth Ceramic Holdings reported that his company in 1969–70 had experienced "extremely difficult trading conditions" as well as, in 1970, "fierce competition" and a "further narrowing of margins."

If Markham's category of dominant price leadership refers to industries where price and discount policy in all methods of selling is wholly and continually dictated by one firm irrespective of the state of market conditions, it does not quite apply to these three candidates in the sample of industries. If the total sample of industries is representative of industry as a whole then it follows that the concept can be applied only in a limited number of instances.

*Barometric price leadership*

Markham recognised the difficulties of differentiating between this situation and that where firms follow the price increases of a partial monopolist. However, barometric price leadership proper is not easily defined.

The plant-baked bread, glass bottle and sanitary ware industries have each exhibited the outward signs of barometric price leadership—simultaneity and similar magnitude of price changes. Moreover in each of these industries there is little difference between the market shares of the leading firms as the table shows.

None of these firms can appear to induce others to follow its lead in prices in a "semi-dominant" price leadership situation.

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Table I
Market shares in the bread, sanitary ware and glass bottle industries

<table>
<thead>
<tr>
<th>Bread</th>
<th>Sanitary ware</th>
<th>Glass bottles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank Hovis</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>McDougall</td>
<td>25</td>
<td>Armitage-Shanks 30</td>
</tr>
<tr>
<td>Associated British Foods</td>
<td>24</td>
<td>Ideal-Standard 20</td>
</tr>
<tr>
<td>Spillers-French</td>
<td>20</td>
<td>Twyford 20</td>
</tr>
<tr>
<td>Doultons</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Source: Trade estimates

Stigler’s interest in the subject of price leadership was in discussion of the existence of the “kinked” demand curve: that is, the situation where a firm finds a price increase is not followed by competitors and has to be rescinded. The sanitary ware industry was the only one in the sample where evidence of rescinded price increases could be established. Even there we can find cases of early attempts to increase prices from the low levels to which they had fallen after the demise of the industry’s price agreement in 1957. Barometric price leadership seems at the present time to be a stable market situation. This can be explained by the fact that in joint negotiation with organised labour all major firms feel the impact of similar wage increases on a common data. If firms are in the same broad band of efficiency, as is argued, for example, in the case of the sanitary ware industry, then no one firm is better placed to offset costs more than any other and, hence, offer more attractive items to buyers. Moreover, in the case of durable goods like sanitary ware, and to a lesser extent, glass bottles, when firms are working to near capacity it is virtually certain that prices will move up in unison. This is because a firm that retains existing prices will find such an increase in custom that reasonable delivery dates cannot be met. A particular problem arises which is that old, valued customers may be forced to wait delivery in deference to satisfying new buyers; such problems are avoided by falling into line with the rest of the industry.

However, the varied character of “barometric price leadership” can be illustrated in the case of the bread and glass bottle industries.
In the former industry the identity of the price leader has varied since the Federation of Wholesale and Multiple Bakers' agreement was struck down by the Restrictive Practices Court in 1959. Until very recently neither Rank-Hovis McDougalls nor Associated British Foods could merit the description as the industry's price leader. However, in November 1970 the latter advanced prices by less than what other firms seemed to be planning to effect, thus obliging them to follow its lead. With decimalisation of sterling in February 1971 it rounded down its price for the large loaf by 20% from Is. 11d. to 9½ new pence, again setting the pace for its rivals. The same was true of a price increase announced by the company in November 1971 which its rivals matched. Such conduct is hardly dominant price leadership—certainly not as redefined earlier—but seems to be a stronger version of barometric price leadership that it contained within the received understanding of this term.

In the glass bottle industry United Glass accounted for about 30% of sales in 1961—three times the share of Rockware Glass, the next largest firm. But within three years to 1968 Rockware trebled its size by acquiring Fosters Glass, Garston Bottle and Jackson Brothers of Knottingley. Since making these acquisitions it has also announced price increases rather than wait for a lead from United Glass. The absence of one recognised leader seems to suggest that the industry can be characterised by barometric price leadership. But it does seem to be a more competitive environment than this term might suggest. This is because glass bottles are an intermediate industry. Bottle firms sell their product to food manufacturers, brewers and many other trades before resale to retailer, and thence ultimately to final consumers. The industry is double then affected by competitive pressures experienced both by its immediate and distant customers. Effective price increases for glass bottles are somewhat less than announced price rises since buyers for the food, drink

*The change in character at this time seems to be explained by what are in effect price-cutting tactics of certain large independent plant bakers which have expanded at the expense of the major national concerns. Yet again this has been achieved by off-list concessions to large supermarket chains which the accepted definitions of leadership ignore. The lead given by Associated British Foods is explainable at root by its more compact and efficient structure relative to the rest of the industry. It was not caught up in the rush for bakery outlets in the 1950s and has made more rapid progress in rationalisation made necessary by falling demand for bread than its competitors.
and pharmaceutical industries take such pronouncements as a proposal subject to negotiation. Bottle makers cannot press their case over-strongly since glass faces substitute packaging materials, in particular plastics, and metal cans. The nature of price relationships for these alternative forms of packaging is thus of critical importance in determining prices to sales to large customers. The somewhat fragile nature of price leadership in this industry is also attributable to firms making particular price concessions on certain lines of production. Thus in multi-product industries parity of prices on any one item between competing firms need not exist.

Barometric price leadership seems then from the sample to be a somewhat fluid concept. It could be applied to many "generally competitive" environments. Its imprecise character is the more regrettable at least in the context of the UK if cognisance is now made of two further issues—information agreements and government prices policy. These make the identification of possible situations almost impossible.

Information agreements

Price leadership was not the sole solution to pricing decisions following the demise of price agreements as a result of the 1956 Restrictive Trade Practices Act. The emergence of information agreements after 1956 has been widely recognised and indeed it is clear that information agreements were set up in most of the eighteen industries studied. They include the cable industry discussed earlier in terms of dominant price leadership and the glass bottle and bread industries analysed in terms of barometric price leadership. As a result of the 1968 Restrictive Trade Practices Act such information agreements appear to have been abandoned. But their existence until recently would have made any allocation of industries into the dominant and barometric categories of price leadership impossible. Price leadership of either variety can be seen as the outward sign of the operation of an information agreement. A situation called dominant price leadership might, where informational exchange exists, be described as one with a de facto post-notification agreement. Barometric leadership may simply be a euphemism for more
collusive determination of prices. Indeed interviews in some of these and other industries indicate that price increases were deliberately "staggered" in the early 1960s to avoid the appearance that changes had been the product of informational exchange by firms.

A second factor which makes the identification of types of leadership exceedingly difficult in the past five years has been the operation of the Labour Government's prices and incomes policy. During the period of the "early warning system" firms in many industries were virtually invited to agree on price increases by relevant Government Departments. The simultaneity of price changes can thus hardly be surprising since price increases could not be made except with the tacit blessing of Government Departments. Similar price changes have ensued from the operation of the price restraint policy operated by the Confederation of British Industry after 1970.

Conclusion

Price leadership has long been part of the vocabulary of the economist and businessman. In practice, this is a highly elusive concept. The distinction between the dominant and barometric situations is one of degree rather than kind—particularly given the existence of the influences such as the institution of information agreements and the operation of prices and incomes policy. Markham's two categories do not permit an obvious classification of the competitive conduct in the sample of industries that have been examined, at least in the 1960s. A more rigorous set of definitions is required. One might suggest at least the need to distinguish leadership based on list prices from that based in respect of off-list prices (discounts) and tender prices. But this itself does not produce an unambiguous description of conduct in any one industry. The Monopolies Commission is thus likely to find the nature of the practice a tricky matter let alone the policy implications.\(^{10}\)

\(^{10}\) Price leadership was referred to the Monopolies Commission in May 1971, Sir Keith Joseph declared in 1970 that as a result of the 1956 Act "some industries have retreated to more subtle operations, much harder to get at. Price leadership: very difficult to get at." _The Financial Times_, 17 March 1970, p. 31.