Price policy and price decision making in small companies

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by

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Title

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Summary

The economic theory of the firm is still a very imprecise instrument for explaining and predicting decision making behaviours in a business organisation. This thesis examines the pricing aspects of this theory as they apply to small companies, those employing less than 250 people, and attempts to overcome some of the limitations of earlier investigations by restricting the sample to entrepreneurial type companies in two industries where there were a few large companies and a larger, but limited, number of small ones.

An examination of the contextual framework of the companies revealed a marked difference in the age profile between firms visited in the display industry and those in the press metal working trade. This was due mainly to the nature of the activity involved and its historical background, and also to the influence of World War II on certain types of business activity. There was also a significant difference in the owner-management relationship in firms in the two industries. From the decision making point of view, however, the survey revealed no marked difference between firms in the two industries and no significant deviation in either from the decision making characteristics embodied in the concept of the entrepreneur contained in the traditional theory of the firm.

Objectives in small companies are rarely written and issued formally but it was, nevertheless, possible to identify three types of objectives used as the basis for decision making; these were the long term objectives, the rationalised objectives, and the dominant objectives. The evidence obtained suggests that most small companies were concerned in a general way with profit maximization and made a conscious effort to put this into effect wherever the opportunity presented itself.

The majority of firms visited had a price policy of charging what the market would bear within the limits of their knowledge of the market and the customer. The pricing techniques used varied considerably and ranged from a fairly simple historical costing approach to one involving complex forward budgeting calculations. The actual pricing decision did not always conform with the pricing policy of the company with the result that there was often a significant financial deviation from the budget.

There was no evidence of any explicit understanding and use of the marginal analysis in academic terms. There was, however, some indication that many entrepreneurs had developed a cruder and more practical marginal approach which, under the circumstances, was appropriate and reasonably effective. Because of the imprecise nature of the information available the individual entrepreneur's reaction to a particular market and output situation was often slow but, within the limits of his perceived knowledge it would appear that he did attempt to equate margina order cost and marginal order revenue thereby achieving a rough optimum output level and, in a general way, profit maximization.

CONTENTS

Chapter 1.

The economic background

There has long been, and is, considerable dissatisfaction among both academics and businessmen with the economic theory of the firm, first because the theory has failed to provide an adequate explanation of decision making behaviour in business organisations, and second because businessmen have found it extremely difficult to use the theory as a tool for decision making in their day to day activities. More specifically, these criticisms have been concerned with the assumptions relating to market conditions, to the nature of the organisation, and to the motivational basis of behaviour which underlies the theory; and with the validity of the marginal analysis as a means of determining optimum price and output levels. Since many of these disputes have involved concepts and activities which lay outside the purely economic field, the conflict has not been restricted to economists. The involvement of quantitative and behavioural scientists in the argument has resulted in the application of a more appropriate, and effective, set of conceptual analytical tools to this problem. The resultant improvement in the theory of the firm has thus been accompanied by a change in its character; it is no longer regarded as an exclusively economic theory and is now generally recognised to be a behavioural theory of the firm involving concepts from many disciplines.

As in other areas of study the changes in the theory have been based primarily upon evidence from empirical research. Unfortunately research in this subject is much more difficult than in the physical sciences because one is concerned with management decision making and the conclusions are, therefore, less definitive. One further major problem inhabiting the formulation of a comprehensive theory of the firm is the wide diversity of environmental and organisational conditions within which decision making occurs. Most of the empirical research work carried out so far has been in organisations employing more than 500 people so that developments in the theory have tended to bypass the problems of the smaller firm. A limited amount of empirical research has indeed been done on pricing and output decisions in smaller firms, but the diversity of firms and products covered by these relatively small samples has been a major factor preventing researchers from obtaining conclusive evidence with which to support, or challenge, the theory. This thesis investigates certain aspects of the theory of the firm as they apply to smaller companies, mainly those employing less than 250 people, but it attempts to overcome some of the limitations of earlier investigations by defining more strictly the scope of the sample and choosing more precisely the types of activity to be studied.

In more specific terms, the objects of this investigation are:

1) to examine the principles underlying the formulation of pricing policies in small firms, the factors which influence day to day decision making and

2) to identify, and explain, any discrepancies which arise between policy and practice.

The major source of information has been personal interviews with the chief executives of small companies in two specific industries located in the West Midlands. The first of these is the display producing and screen printing industry which provides ideas and products for exhibitions, window and merchandising displays, and various point of sale items. The second is concerned with pressmetal working. The products of the firms in this latter category include commercial vehicle parts, parts for domestic appliances, and electrical wiring accessories such as channeling, conduit, and earthing clamps. In both industries the companies visited employed less than 250 people and produced a differentiated product, generally to the customer's specification. There was, however, a significant difference between firms in the two industries in terms of owner-management relationship and the degree of competition in the market.

There are so many myths which exist in these two trades concerning suppliers and customers that it was felt necessary to examine some of these relationships from an outsider's point of view.

Thus to supplement these enquiries and to ensure that the results are set in their proper context information about objectives, price policies and practices, was obtained from one small printing company which supplied products for the display producers and screen printers, and one small metal merchanting company which provided some of the basic material with which the press metal working firms operated. Information was also obtained from a few large customers of firms in both industries. By coincidence data was also available from a small firm in the building supply industry and this was included for comparison purposes.

General background information on company objectives and pricing policies was obtained from a questionnaire issued to approximately 1,500 companies mainly, but not entirely, in the Midland area, and was supplemented by information contained in 41 responses to an earlier questionnaire issued by the Industrial Administration Research Unit, The University of Aston in Birmingham, concerned with the structure of organisations.

Because of the expense involved in collecting empirical evidence in real life many

research organisations, and industrial concerns, are experimenting with the use of simulation models as research tools. Since a number of simulation business management exercises were being conducted both inside the University of Aston and outside the University under the direction of a member of the academic staff during the period of the survey, statements of objectives and policies made by participant simulant 'companies' during the exercises were collected and compared with those obtained by interview and questionnaire from real companies.

Before discussing the evidence obtained during this present investigation it is useful to provide a brief resume of the progress which has already been made in the theory of the firm.

Environmental conditions

The classical economists identified two main market conditions within which a firm operated, perfect competition and monopoly. The presence of other, non-typical, market conditions was recognised, but the clarification and elaboration of the intermediate classifications was left to their successors. It is in this area that economists have been most active. The works of Augustin Cournot[1] and Francis Edgeworth[2], E. H. Chamberlin[3] and Joan Robinson[4], P. W. S. Andrews[5], F. Machlup[6] and W. Fellner[7] have gone a long way towards providing a more realistic framework of marketing conditions within which to consider the application of the marginal analysis in individual companies. One of the major problems in this context is, of course, the fact that neither the individual company nor its environment is static, and consequently the market conditions subsumed in the framework of analysis need to be related to a specific time period.

The nature of the business organisation

It is clearly unrealistic to describe all modern business organisation in the entrepreneurial terms used by the classical economists. In many organisations the entrepreneurial functions are now divided between many individuals, some of whom are active in the business and others not. This division of responsibility has many implications and consequences, some of which fall within the purview of the social psychologist and sociologist rather than that of the economist. It is in this area that the influence of behavioural scientists has become most apparent and a new interdisciplinary approach to organisation theory[8] is emerging.

The growth of large scale organisations in modern society has naturally focussed attention upon the problems inherent in such a development. Thus much of the research work that has been undertaken in organisational studies has been concerned with the larger company.

There remains, however, a large number of smaller, entrepreneurial type, firms which retain many of the charcteristics embodied in the firms known by the classical economists. It is with this category, the small entrepreneurial owner-manager type company, that this investigation is concerned. Nevertheless the significance of the contextual variables[9] is apparent and, to some extent, quantifiable even among the smaller organisation.

The motivational basis for decision making

The classical theory of the firm postulates profit maximisation as the sole motivational factor underlying the process of decision making in the business organisation. This has offended the sensibilities of some economists and behavioural scientists who have argued that there will generally be a multiplicity of objectives involving social, cutural, and economic ends. But here, as with the market classifications and the entrepreneurial concept, the architects of the economic theory of the firm may have been concerned to reduce the number of variables involved to manageable propertions, to produce, as it were, the 'cogito ergo sum' of economics and thus to provide a conceptual framework for analysis which could subsequently be developed and refined.

The main arguments in favour of a multiplicity of objectives are ably documented by R. M. Cyert and J. G. March in 'A Behavioural Theory of The Firm'.[10] In that volume the authors attempt to develop a general behavioural model of price and output for a large multi-product firm operating under conditions of uncertainty in an imperfect market. The difficulty, for the theorist, arises in identifying organisation goals. Individuals have goals but, it is argued, collectives of people do not. Cyert and March resolve this apparent contradication by acknowledging something at the organisational level which is analogous to goals at the individual level. But it would still appear illogical to accept one single organsational goal as being a satisfactory representation of the aspirations and motivations of a group of people so the authors suggest a theory involving a multiplicity of organisational goals. This hypothesis has many supporters including economists such as Papandreou[11], and Alchian and Kessel[12], who have put forward the idea of a general preference function to replace that of the single dominant profit maximisation concept.

The marginal equilibrium analysis

The core of the economic theory of the firm is, of course, the marginal equilibrium analysis, the process by which the individual firm is supposed to maximise its net revenue. The optimum price and output levels which provide this situation are obtained when the firm equates marginal cost and marginal revenue. There is an increasing amout of empirical evidence

which shows that very few firms do in fact equate marginal cost and marginal revenue and that the theory's assumption of knowledge concerning cost and revenue functions in firms is unrealistic.

The marginal analysis controversy was first brought into prominence by Hall and Hitch[13] in 1939 on the basis of discussions with businessmen and the answers they received to questionnaires on pricing behavour. They reported "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". Most of these entrepreneurs stated that they charged the full cost price but a few admitted that the occasionally modified the price for various reasons, including that of meeting competition. This initial attack was supported, after the war, by papers from R. A. Lester[14], H. M. Oliver[15], and R. A. Gordon[16], and the evidence adduced by P. W. S. Andrews in his book 'Manufacturing Business'. A succinct account of the attack on marginalism, and of the strong counter attack put up by F. Machlup[18] are contained in the first chapter of R. H. Barback's book 'The pricing of manufacturers'[19].

An important aspect of the evidence put forward by Hall and Hitch[20], Andrews[21], Hague[22], and others in support of the full cost hypothesis is that in each case there is evidence of firms who deviate from the normal patter of pricing prescribed. This is not an insignificant factor and does considerably weaken the authors' case for full cost pricing. There is also some confusion over the manner in which the 'normal' or 'conventional' price margin is calculated but a refusal to accept the implications of this as evidence in demand analysis. Eitman[23], however, believes that before setting the final price for a new product the business "Will make some enquiry regarding the possibility of selling the new product at this price". He believes also that price changes are based upon changes in turnover and inventory. It is possible to refine this a little further by arguing that in chronological order changes in demand may be detected through

1) a declining order book position,

2) increasing stocks,

and 3) a reduction in output.

This, of course, is the very crude way in which the majority of firms measure demand on a continuous basis. The difficulty that arises is one of interpretation. For example, D_8, one of the firms in the display industry included in the sample reacted to a change in demand by lowering the price of its products only to find that this was not the main reason for the fall in demand.

Attempting to bridge the gap between economic theory and practice Hague[24], Wiles[25], and Fog[26] make the point that many small firms see their individual markets as being perfectly competitive in the sense that demand has perfect elasticity. Wiles qualifies this by stating that "in some cases there is an absolute stop to the demand curve at a certain point, i.e. where the production quota is fulfilled". Wiles then continues the analysis to argue that empirical research into cost and price behaviour reveals no difference in the determination of optimum output in firms which have such demand curves and others who do not. The argument is that under such conditions marginal revenue does equal marginal cost thereby achieving profit maximisation. This follows because (as Hague also explains) marginal cost is stable over a large portion of output and the businessman will continue to increase output until he 'feels' long run marginal cost (partial adaptation) rising. When long run marginal cost (p.a.) rises, Wiles argues, it rises sharply, well before short run marginal cost (p.a.), but will, by definition, cut the long run average cost (p.a.) at its lowest point. Since the rise in long run marginal cost (p.a.) is rapid the difference between the optimum perceived output OX and the theoretical optimum is insignificant.

Figure 1.

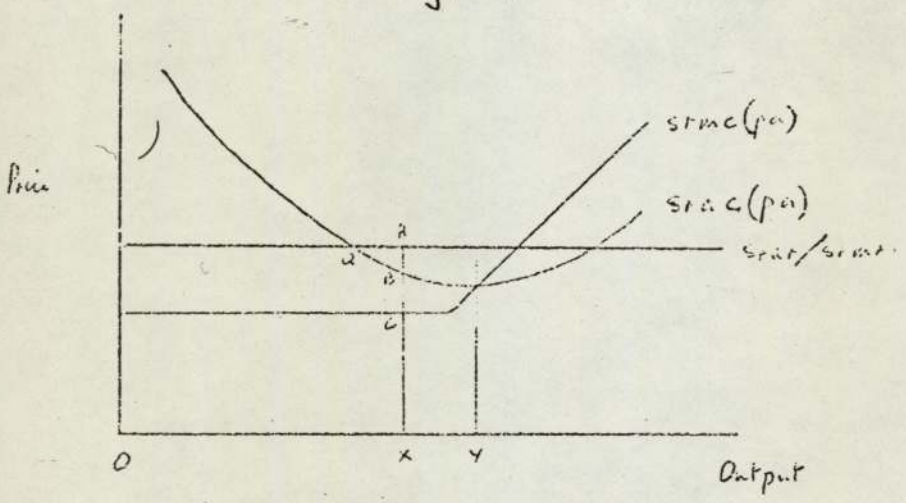
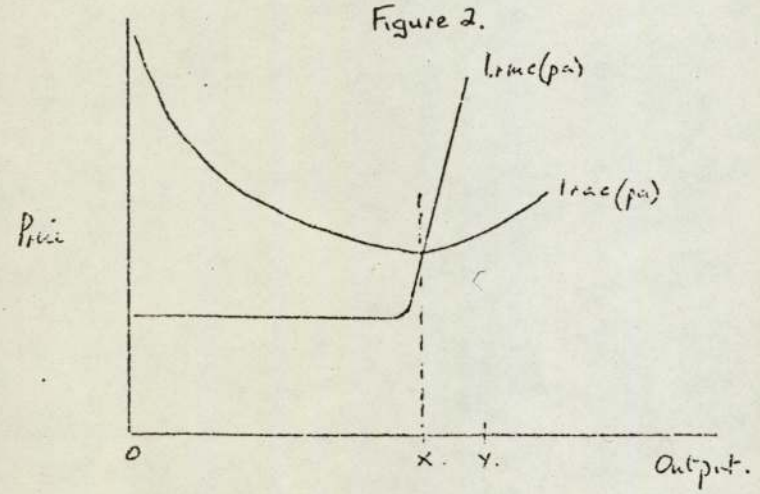


Figure 2.



In the display producing industry there are very few firms who see their own demand curve as perfectly elastic. Most firms consider the market to be relatively inelastic with the added complication that demand arises in large indivisible chunks. Thus many small firms, although they may be operating well below capacity level, may find it difficult to obtain, or handle, a very large order. For this reason they leave the very big customers to the large producers in the hope that they may obtain some subcontracted work from the large producer if he is not able to cope. There is a further problem which would complicate the OX position outlined by Wiles. In the display industry labour expects to work a certain amount of overtime and there is a very rapid deterioration in morale when overtime is not available.

Assuming there is adequate demand to enable firms to operate at the optimum level, the introduction of an inelastic demand curve would not destroy the argument put forward by Wiles and would to some extent reduce the discrepancy between the hypothetical and the real point of optimum output.

One other point of interest arises from the fact that the larger firms do adopt a policy of subcontracting to provide a buffer which will protect them in times when demand falls. Thus by asking other companies to manufacture for them instead of providing suffifient capacity within their own organisation to meet peak demand they are able to operate at their optimum output level for a much greater proportion of the time. It does mean also that the real marginal cost of that portion of the work is fairly clear.

Fog[27] makes the point that the marginal concept may be unacceptable to some businessmen because it implies a restriction of output in order to maximise profit. This is not always the case as was demonstrated by the principle of subcontracting mentioned above and by firm S_1 during the period of research leading up to this thesis. By the time S_1 became a private limited company in 1960 it employed 9 people including the founder member and his wife. In the years immediately following 1960 the company grew at the rate of one additional person every two months, so that by 1964 it employed approximately 35 people. The company during this period had operated almost entirely within the one market and confined itself to one range of product. At the end of 1964 the company suddenly became aware of a marked seasonal fluctuation in demand. Until this time there had been no noticeable change over the trading year. When a comparison was made with another larger organisation in the same field it was discovered that the fluctuations suffered by the firm were indeed the seasonal fluctuations normally

experienced in the market. The signs were, therefore, that the company now had a significant share of the market and was being affected in the same way as other 'large' suppliers.

Since the firm offered a service rather than a product, and the delivery time rarely extended beyond 48 hours, it became obvious that providing facilities to cope with the peak seasonal demand could mean having unused resources for much of the year. The decision was taken, therefore, to reduce the resources available for this particular market and to utilise the extra capital to diversify production to satisfy a rather different market. This process was repeated at a later stage with the second process and a further diversification took place.

This was a clear example of restriction of output to maximise profitability which does coincide with the marginal theory.

In the pressmental working industry not one of the firms visited saw its demand curve as being perfectly elastic. Some firms supplying electrical accessories dealt with a large number of wholsesale outlets and thus did not have the same problem of indivisibilities which firms producing to customers' specifications experienced. Again there was a certain amount of subcontracting which enabled a firm to 'restrict' its output in the technical sense without foregoing the income. Only in that section of the industry using presses in excess of 500 tons was there any shortage of capacity apparent. Below that level there was a permanent excess of capacity which made the market very competitive.

From the amount of controversy generated, and from the empirical evidence available, it is obvious that the theory of the firm in its general form leaves a great deal to be desired. This investigation attempts to determine whether, in specific situations, the theory may be modified to provide a more adequate explanation of, and predictive mechanism for, decision making in a business organisation.

Chapter 2

Past Studies in Small Firms

Since this particular study is concerned with pricing policies and practices in small firms it is relevant to examine briefly three of the more important studies in this area.

These are reported in:–

i D. C. Hague[28] "Economic Theory and Business Behaviour" Review of Economic Studies XVI 1949–50.

ii Bjarke Fog[29] "Industrial Pricing Policies. An analysis of pricing policies of Danish manufacturers" (Translation of doctoral thesis). Amsterdam North-Holland Publishing Co. 1960.

iii W. W. Haynes[30] "Pricing Decisions in Small Businesses". University of Kentucky Press. 1962

(i) The paper by Professor Hague sets out the results of a survey in the Black Country during 1947 and 1948 on the way in which business executives decided what prices to charge for their products and what quantity to produce. Information was obtained from 20 firms, 8 with more than 500 employees, 12 with less than 500, and 8 less than 250. The sample was an assorted one covering a variety of industries but it was not claimed to be 'representative' in any way. The results of the investigation were related to the basic concepts of the marginal theory to see whether there was any conscious, or subconscious, attempt to maximise profit by equating MR and MC. The executives interviewed were at that time unaware of the concept of marginal revenue and thosrelatively few individuals who had heard of marginal cost were not interested. The point is made, however, that ignorance of the tools of marginal analysis does not mean that the results differ substantially from those postulated in the theory.

There was considerable evidence that the companies' objectives included both economic and non economic ends, but almost all firms felt that one major objective was to keep the plant operating at capacity level. When asked specifically about profit both large and small companies expressed a desire for long term rather than short term results. Within the long term category there was a marked difference of opinion between some smaller firms who indicated a desire for financial stability and some of the larger companies who were concerned to earn as much as possible.

The general conclusions of the survey were that

(1) "The desire for maximum monetary profit, though it seems stronger in large than in small firms, is not ubiquitous".

(2) In practice, business men have only subjective estimates of costs and revenues and therefore base prices "on accounting estimates of average cost, adapted to conform to expectations of demand conditions".

(3) None of the firms explicitly attempted to equate marginal revenue and marginal cost.

(4) Business men were unaware of the significance of the marginal analysis.

(ii) Professor Fog defines the purpose of his investigation in Denmark as an attempt "to contribute to the development of a descriptive price theory". Traditional price theory, he states, must be regarded as having an 'instructive' character but there is a considerable doubt whether this theory is also an adequate basis for describing what happens in practice. His survey is an attempt to bridge the gap between theory and practice, and to find out whether business-men do act in accordance with the principles of marginalism. Because of the difficulties and limitations involved in obtaining price information by observation from outside a company, it was decided that the case study method would be used. This involves a thorough and detailed analysis of pricing behaviour through personal interviews with the individuals responsible within each company. There were varying degrees of frankness in the responses and it was often found necessary to make repeat visits to gather all the information required.

Although the investigation was a general one covering many types of industrial activity it did also include some special investigation of a few specific industries. Most of the evidence collected related to standard type products produced under batch conditions for sale on a continuing basis. There is comparatively little specific information in Fog's report about those types of small firms which are involved in jobbing production of differentiated items involving some creative aspects.

The total sample contained 139 firms with some supplementary information collected from a further 46 firms. 80 of these employed less than 100 people and 46 of these were engaged in the footwear industry. Despite the apparent emphasis on small firms Professor Fog states that "the information has mainly been obtained from large and medium sized firms with the exception of the footwear industry which includes a great number of small firms and where 46 out of the 54 firms investigated employed less than 100 people".

Professor Fog echoes the dissatisfaction of contemporary economists with the profit maximisation hypothesis. In his study the general character of the stated objectives combined a

desire for steady long-term profit with that for the greatest profit in the long run. This was similar to the evidence obtained by D.C. Hague in his earlier survey in the U.K.

Responses to Fog's questions on the knowledge of marketing conditions suggested that firms were much more interested in anticipating fluctuations in demand than they were in measuring price elasticity. The smaller firms saw their own individual demand curve as a horizontal one, but the market demand curve as a vertical one. Information about the pricing procedures used by individual companies highlighted the importance of material costs as a basic element in the formula, yet overheads were still generally allocated as a percentage mark-up on labour cost, and price was calculated by adding a variable percentage for profit on total cost. The variation in the final percentage addition was related to the market situation.

(iii) The third work of relevance is a report by W. Warren Haynes of a project carried out at the University of Kentucky and financed by the Small Business Administration Management Research Program. This was a study of pricing behaviour in 88 American companies ranging in size from 1 to 200 employees. The sample was not structured in any way other than in size and, therefore, was not representative of any particular industry or section thereof. The firms investigated included

26 retailers,
6 wholesalers,
21 service organisations
2 retail and service companies
28 manufacturers
and 5 landscape gardeners and nurserymen.

As in the previous study, the information was collected by means of personal interviews and open-ended discussions, which gave the interviewer complete freedom to pursue a line of enquiry if he felt this would provide relevant information.

The object of Haynes' study was to obtain a greater understanding of the decision-making process within the individual firm, and focussed attention upon the particular influences which affect pricing behaviour. Much of the evidence obtained conflicted, in many respects, with previous work done on pricing. Professor Haynes draws attention to the inconclusive nature of evidence drawn from such a relatively small and unrepresentative sample, but goes on to claim that "while the importance of the study to general price theory is conjectural, we believe our findings are important in the area of managerial economics".

The product and market structure of three of the categories of firms investigated by Professor Haynes were similar in many respects to the small firms included in this thesis. It is therefore worth noting some of the more important characteristics in his report.

The first of Haynes' classifications was the automobile repair shops. These were small entrepreneurial type organisations specialising in body repairs and having a limited number of competitors. The investigation revealed a positive analysis of the market and the cost situation by each firm and a deliberate attempt to vary prices in accordance with the information available; a clear case of marginalist thinking.

The second group included a Billboard Company. This was an aggressive organisation deliberately adopting a trial and error pricing technique in an attempt to maximise profit. In this case the incremental costs in the short run were so low that maximising revenue automatically resulted in maximising profit. The trial and error process did not involve discrimination between customers and all were quoted on the same price basis.

The third group involved building contractors. Here the general approach was to use competitive prices as a guide but to adjust the final price according to the market situation. Thus if the firm was busy the prices quoted were higher than when capacity was under-utilised. All three examples cited illustrate, in some measure, the use of marginal concepts and a deliberate attempt to maximise profit.

The general conclusions drawn from the cases were

i Most companies do not adhere strictly to a full cost plus fixed margin approach to pricing. There was a flexibility within a formula using full costs which permitted a differentiation over time, even in the short period, and between segments of the market.

ii An important minority of companies do follow a fairly rigid pattern of pricing with the emphasis on cost and not on demand.

iii Where full costs are used in pricing they are used as a reference point, a floor, below which the price should not fall. Often a pricing formula eases the problem for a busy manager until competitive pressure causes him to adopt an ad hoc procedure.

iv Many firms in retailing and wholesaling use mark-up techniques which are not related to their own costs but are based on the 'bought in' price.

v The mark-ups used by a single firm may vary from product to product depending on (a) costs and (b) market conditions.

vi A few companies avoid the problem of pricing by accepting external guides such as a manufacturer's recommended price or the price set by the 'price leader' in the industry.

vii A substantial minority of firms did not mention 'mark-up' margins because of the difficulty of quantifying costs precisely.

viii A few cases revealed a trial and error process of pricing which seems to approach the marginalist concept in a rather crude way.

Many firms recognised the importance of past experience of a trial and error character.

Relating the evidence, and the conclusions drawn from the evidence, to the concepts of profit maximisation and the marginal analysis, Professor Haynes gives four reasons why firms do not fully satisfy the marginalist postulates

(a) There are often non-economic objectives which inhibit profit seeking.

(b) Some managers are satisfied with less than maximum profit.

(c) Some managers will not accept the logic of the marginalist argument.

(d) The information and skills needed are not always available.

Whilst the scope in the survey is again not comprehensive, or represenative of a particular sector of industry, it is clear that the small firm does differ significantly from the larger organisation in its approach and this makes it all the more necessary to continue with this type of investigation to see whether further insights and evidence may be obtained regarding the nature and process of decision making in the small firm.

Chapter 3

The contextual framework

The choice of the two industries used for this investigation was based partly upon the objectives and constraints mentioned above but also upon the desire to avoid collecting unnecessary data by seeking firms with a restricted product range, preferably one product only, of a differentiated character. The display firms fitted these conditions admirably but had the disadvantage of being part of a 'young' industry, i.e., the advertising industry. Advertising and display work has only become an important commercial activity in this country since the second world war; thus the majority of firms visited were first generation companies established since 1946. To counter balance this youthfulness the second choice was an industry which has been typical of the British industrial scene since the Industrial Revolution. The press metal working working firms also fitted the constraints well although there was a rather wider product range in many firms than in the display organisations.

This contextual framework of organisations within which price decision making occurs is obviously of considerable importance and requires some consideration before proceeding with the detailed work concerning pricing. It is in this area that the behavioural scientists have been able to provide useful conceptual tools with which to do this analysis. Thus the organisational background to the kind of decision making with which this investigation is concerned is best described by means of the contextual variables outlined by Pugh et al[31]. These are:–

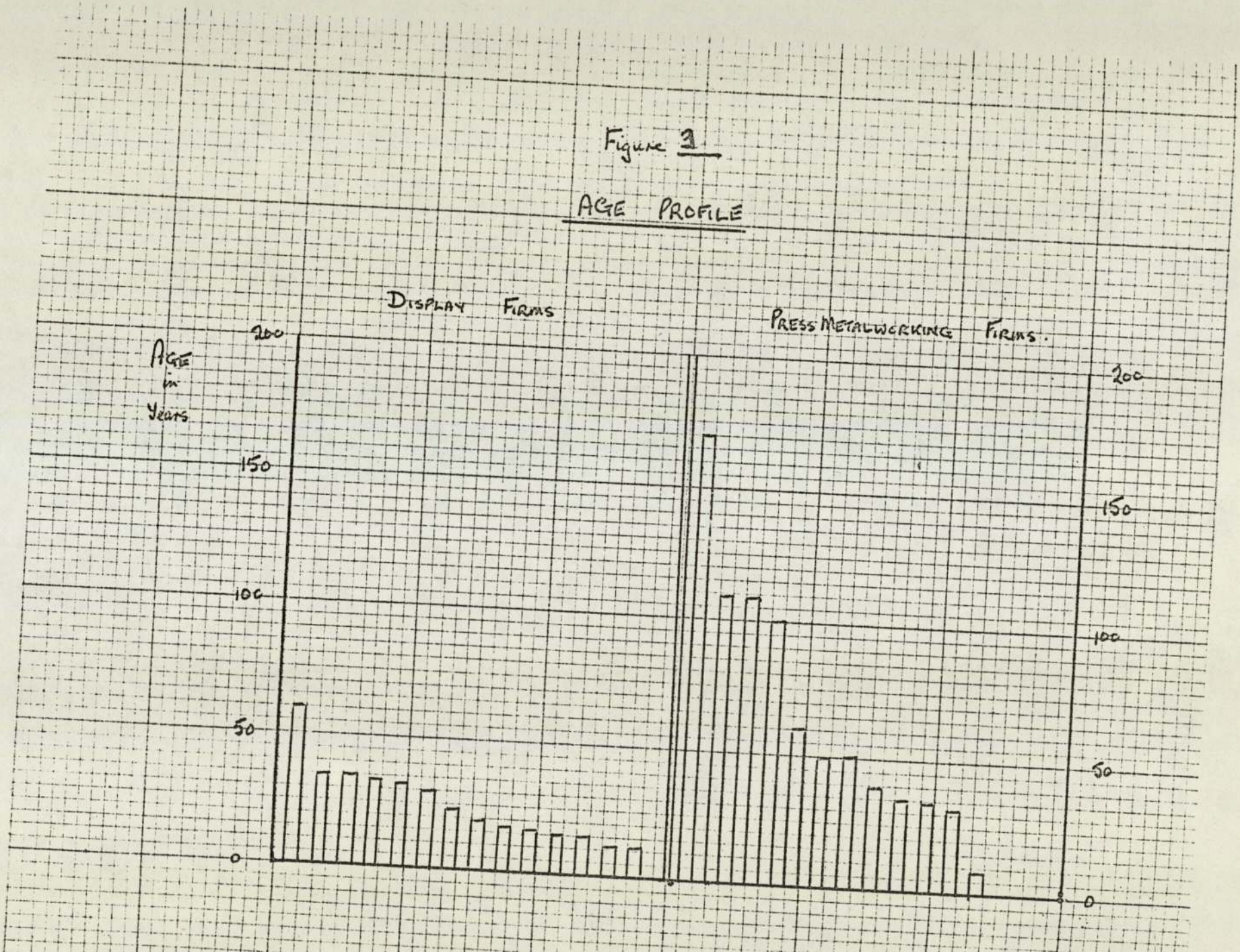
1. Origin and History
2. Ownership and Control
3. Size
4. Charter
5. Technology
6. Location
7. Resources
8. Interdependence

Origin and History

Figure 3 below illustrates the marked difference in the age profile of the small firms in the two industries. In the display industry the average age was about 25 years and over 50% of the firms had been established since 1946. There was very little activity in this field during

Figure 3

AGE PROFILE



the war years and most of the firms registered prewar had suspended operations during hostilities and reopened after 1946. The market developed very rapidly in the years immediately following 1946 and this stimulated the entry of new firms. Two companies were formed in 1950, one in 1952, one in 1953, two in 1954, and two in 1958. Thereafter the rate of growth in the display market diminished as can be seen from Figure 4 and capacity was well in excess of demand in the industry during the period of the survey in 1968 and 1969.

Only one of the display companies owed its origin to a parent company, the remainder were all established by individuals. In eleven companies at least one of the founder members was still active in the organisation. The dominant nature of the founder was still apparant in ten of these eleven but in the other company there were clear indications that a more scientific management approach was being used. The other exception mentioned above was the company formed in 1950 a large, and long established, engineering organisation to exploit developments arising from its own research activities. The executives appointed to run this company had been with the parent organisation for many years: They saw this new venture as a great opportunity for personal advancement and were eager to make a success of it. In this respect they exhibited many of the traditional characteristics of the entrepreneur.

In the press metalworking industry the average age of firms visited was 68 years, only one had been registered since 1946. All the firms concerned had been started by individuals but there was only one firm, other than the postwar registration, where the founder was still participating in the company's affairs, albeit as a very inactive Chairman. However in nine of the twelve cases the chief executive was either a descendant of the founder or, related by marriage to the founder's family. In many of these latter firms the charismatic nature of the organisation had persisted and was clearly apparent at the time visited.

Ownership and control

In three of the display firms investigated the chief executive had no part in the ownership of the company. The chief executive of one of these, D_6, had however been the original owner of the company and was given a free hand to establish his own objectives and formulate his own policies. In the second case, D_{13}, the chief executive was a professional manager who had been with the parent company for a number of years and had participated in the establishment of objectives and the formulation of policies for the new company. The third company, D_1, was rather different in that the chief executive had no part in this decision making process and was

Advertising Expenditure (u.k).

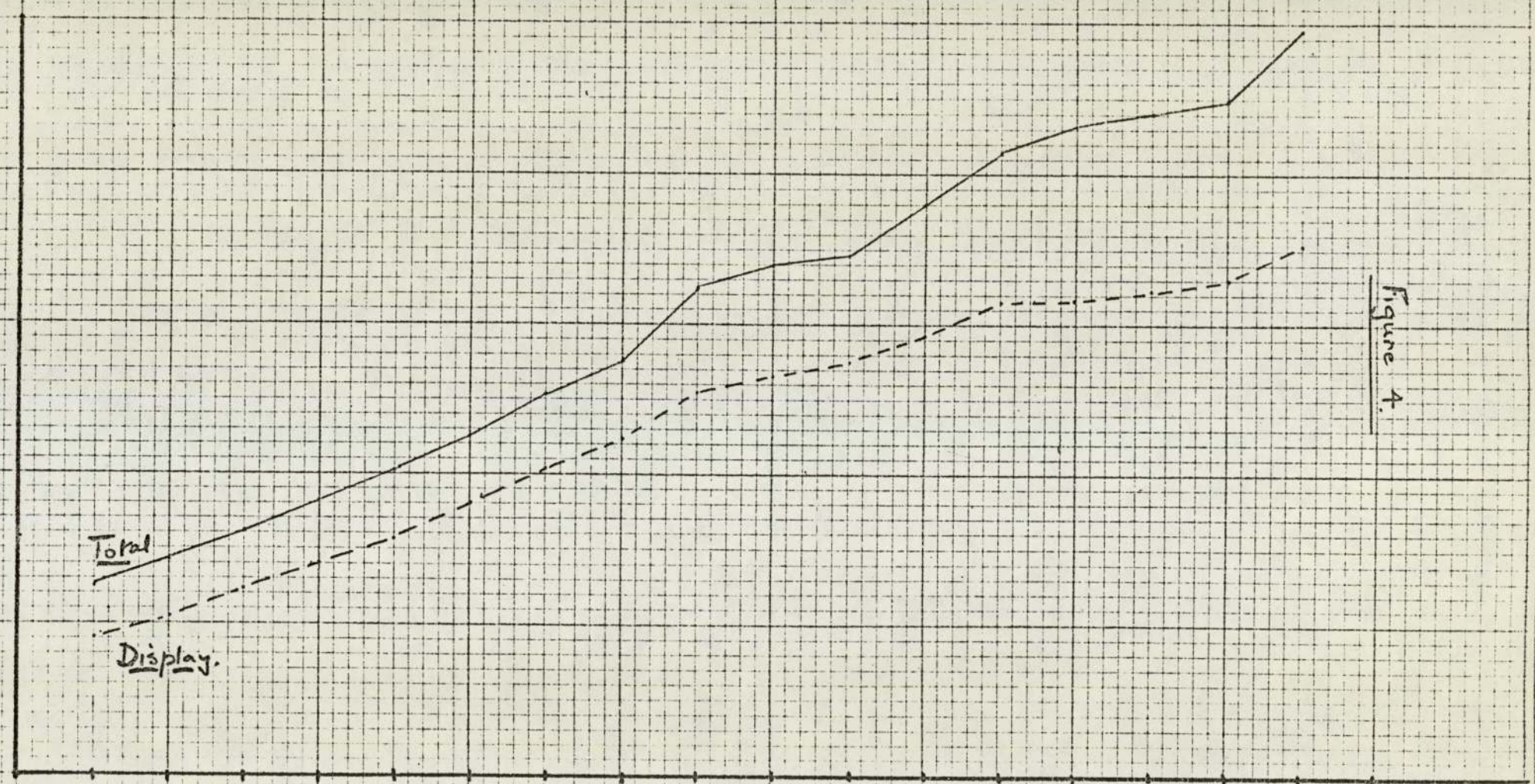


Figure 4.

Source: The Advertising Quarterly P60.
No 20 Summer 1969

very closely controlled from his head office.

There were three other firms in this industry where the chief executive(s) had a significant share in ownership but did not have the controlling interest. In all three cases they were given almost complete freedom to run the company as they wished. Thus for all practical purposes they may be classified with the other firms in this industry where the chief executive(s) also held the controlling interest.

The display industry is one where survival depends upon selling ideas rather than a product so that success depends a great deal upon the creative talents of the individuals employed. The mass reproduction work was generally sub-contracted to other firms but the design work and those items which required a mixture of engineering, electrical, woodworking and artistic skills were handled by the firms within the industry itself. It was not surprising, therefore, that the founder members of such firms were usually skilled in one or other of the technical trades involved. What was disturbing about this situation was that in addition to forming the core of creative talent available in almost all the display companies visited they formed the *only* source of ideas. This provided a very insecure basis for operating and, furthermore, distracted the attention of the chief executive from some of the more strategic aspects of responsibility. They thus fell within the 'reactor' classification given by Ansoff [32] where management waits for problems to arise before making any attempt to provide a solution. There appeared to be a marked reluctance to recruit men with ideas who could assist, or even replace, the chief executive in his creative role.

In the very small company this reluctance was based upon two factors, firstly the cost of maintaining a person with the appropriate ability and potential, and secondly the danger that, because of the small amount of capital involved, this person could easily decide to start a company of his own taking with him, perhaps, some other employees and some customers.

In the larger company this reluctance also appears but this time was based upon an unwillingness by the chief executive to divest himself of his professional role, wholly or in part. There are, of course, many difficult psychological problems which the entrepreneur has to overcome during the growth of a company and this is obviously one of them. But unless he is able to remove himself from this first stage of personal involvement and accept the role of the executive he will find even greater difficulty in the subsequent stages that are required as the organisation grows.

Only in one company, D_{14}, a firm outside the Birmingham area and employing 110 people, was there evidence of a deliberate, and successful, attempt by the managing director to establish a group of creative artists to generate ideas. This scheme had enabled the managing director to withdraw from that role and devote more attention to the strategic problems of growth and diversification for the company.

In the metal pressworking industry there were six firms in which the chief executive had no part in the ownership of the company, and six firm in which the chief executive also had the controlling interest. Again for the purpose of this investigation there was no significant difference between these two groups because the individuals concerned in the form group were given the opportunity to establish their own objectives and policies.

The type of skill involved in the press metal companies was less creative, in the artistic sense, than that used in the display organisations. But the emphasis was again upon providing a service to customers with quality and delivery taking precedence over price as a marketing tool. Only one of the chief executives interviewed was not an engineer and many were still actively engaged in the engineering function of their company. The exception was a cost-estimator who had married the previous Managing Director's daughter.

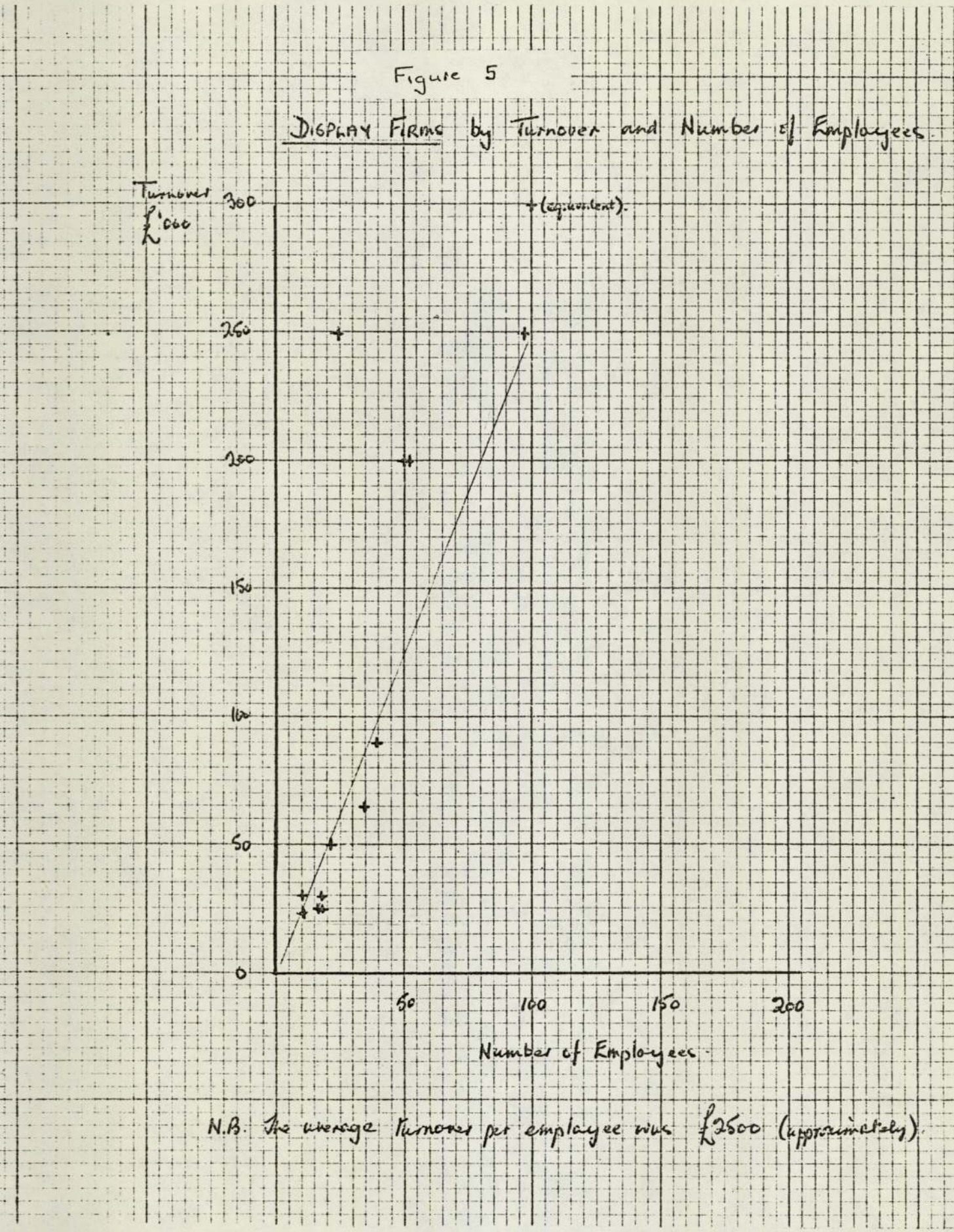
There was, therefore, a marked difference in the owner/management relationship between firms in the display industry and those in the press metal trade. In the former case the firms were predominantly owner operated whereas in the latter case only in 50% of the firms did the chief executive have a controlling interest. Nevertheless there was only one example in each industry of a chief executive who did not see himself as the entrepreneurial decision maker; one actively attempted to enlarge his responsibility, and the other wished the responsibility to be moved away because he no longer owned the firm.

Size of firms by turnover and number of employees

The size profiles of the firms in the two industries are shown in Figures 5 and 6 below. In the display industry the average firm employed some 50 people and had a turnover of £132,000 or some £2,500 per head during 1968/69. In pressmetal working the average firm employed just over 100 people and had a turnover of approximately £320,000 or £3,200 per head. Because of the smallness of the sample the number of employees and the turnover cannot be assumed to be representative of the industry, but the turnover per employee was consistent in each industry and wassignificantly different in each. In the pressmetal firms the higher turnover per head is primarily due to the additional material costs involved.

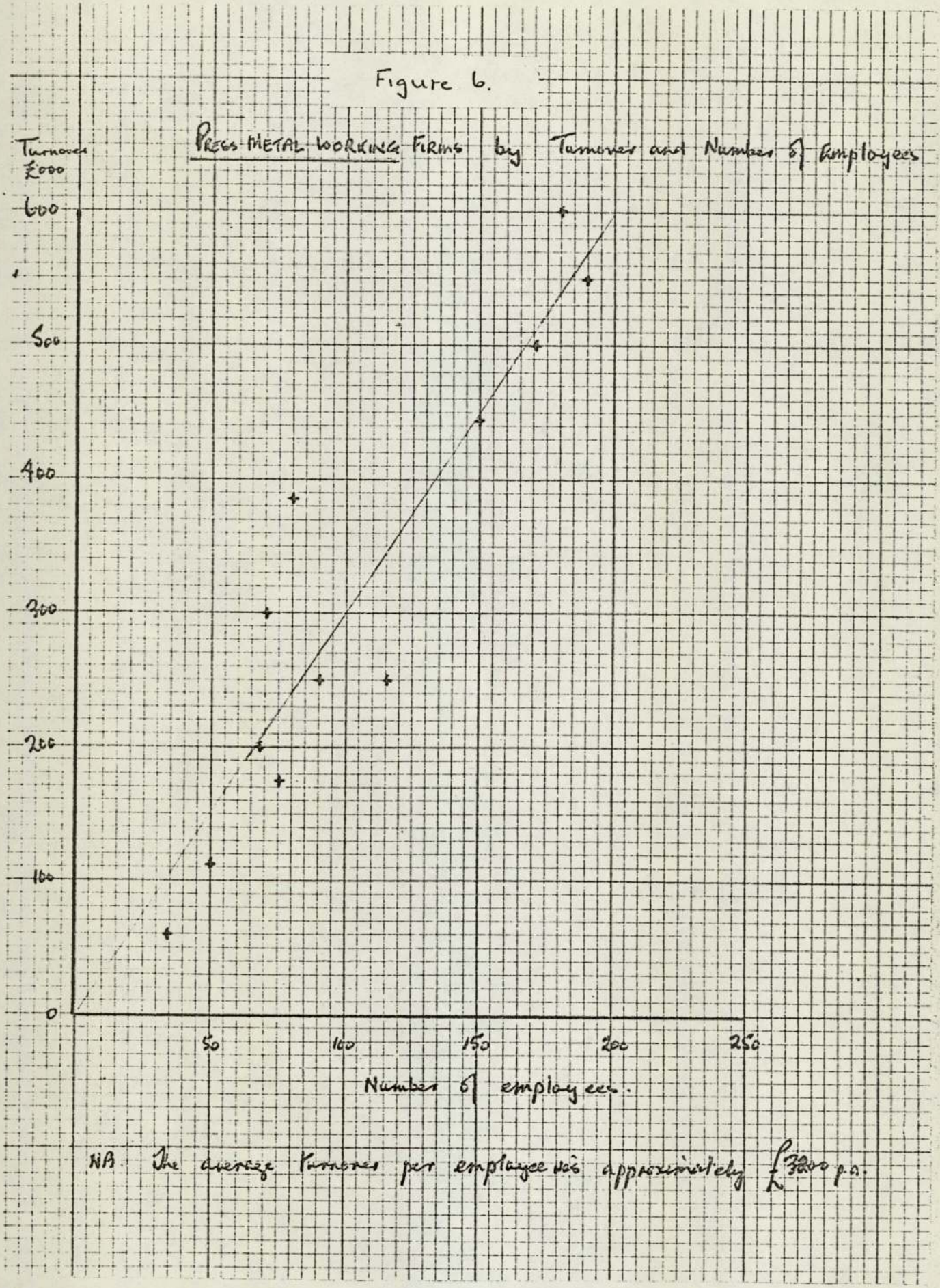
Figure 5

DISPLAY FIRMS by Turnover and Number of Employees



N.B. The average turnover per employee was £2500 (approximately).

Figure 6.


PRESS METAL WORKING FIRMS by Turnover and Number of Employees
Turnover £000
600
500
400
300
200
100
0
50
100
150
200
250
Number of employees.
NB The average Turnover per employee was approximately £3200 p.a.

The marked deviations from the normal employee/turnover relationship in the display industry arose, because the firms concerned were also involved in activities other than display work and silk screen printing, e.g., D_{12} was also an advertising agency.

Charter

The term charter as used by Pugh et al[33] describes the purpose of the organisation and the value system involved. Purpose in this context "provides a general classification in industry-wide terms such as organizations concerned with manufacturing, sales, service, construction, public service, and so on as their major aim," and the value system concerns the goals and the current ideology of the firm.

The goals, or objectives, and the policies of the firms visited are discussed in some detail in subsequent chapters but their 'purpose' is considered here. Firms in the disply industry manufactured selling aids, either from their own ideas or from those of their customers, whether public or private organizations; those in the pressmetal trade were mainly concerned with manufacturing component parts and finished products in metal for other manufacturers and for sale through wholesale and retail outlets. In neither industry did firms sell direct to the public.

Technology

There were a number of technological differences between firms in the two industries investigated which may be described using the characteristics of the scale of workflow rigidity itemised in a paper by D.S. Pugh, D.J. Hickson, C.R. Hinings and C. Turner entitled "The Context of Organization Structure", published in The Administrative Science Quarterly Vol. 14 No. 1 March 1969.

The display firms normally worked to a deadline, such as an exhibition date or a campaign launching date, so that delivery was vitally important. There was very little sophisticated mechanical equipment in these firms and what machinery there was could be used for many purposes. There was no established production line so that a breakdown on one piece of equipment did not disrupt the entire production process. The individual character of the orders made it impossible to build up buffer stocks of products in anticipation of demand.

The pressmetal firms also worked to delivery schedules but to much less demanding ones than the display companies. The amount of machinery used was much greater though the degree of sophistication was not much different. In this case most of the equipment was single purpose units, but there was no established production line and a machine breakdown did not

bring the entire production process to a halt. Since many orders were scheduled for delivery over long periods of time it was possible for a firm to build up buffer stocks if they found it expedient to do so.

Location

In this investigation the location variable was of no significance because the firms visited were all within the Greater Midland conurbation.

Resources

It was noticeable that the largest firms in the display industry (excluding D_{12}) were those which had obtained additional finance from the Industrial and Commercial Finance Corporation or from the parent company. This additional capital had enabled these firms to recruit highly skilled artists and designers who provided a quality and continuity of ideas which greatly benefited the company. It also enabled some of them to purchase modern mechanical equipment to assist in the reproduction work.

Most of the metal working firms visited employed a high proportion of semi-skilled operators on standard metal pressing machines. All of these firms complained of their inability to purchase modern equipment, even the four largest companies which were wholly owned subsidiaries of much larger concerns. The amount of capital employed per employee was approximately £2000, i.e. more than double that used in the display producing firms.

Interdependence

The trade association for firms in the display producing industry did not have a great deal of support but it was a very active organisation and membership was growing. The smaller, and less successful, companies seemed to depend upon the Association to provide them with 'ideas' and with 'information about the market' and there was evidence that members used its meetings as a forum for discussing common problems.

The display firms tended to develop close personal relationships with individual buyers in the customer organisation which resulted in a steady flow of orders, many of which were placed without a quotation being made. On the other hand, there appeared to be very little attempt to develop such relationships with suppliers because the majority of articles purchased were standard materials purchased ex stock.

There was very little evidence of Trade Union membership within the companies visited and a small number boasted of the fact that there were no union members present. The links with other institutions were weak but there did seem to be a growing awareness of the need for a more scientific approach to decision making and some contact had been made by individual firms, and by the Trade Association, with the Department of Industrial Administration, at the University of Aston in Birmingham.

The senior executives interviewed in the pressmetal working firms did not seem at all interested in the local trade association. Communication between competing firms was both infrequent and irregular, and the general impression gained was one of remoteness from other similar organisations and a strong feeling of independence. As in the display industry firms attempted to develop close personal relationships with buyers of large companies. In a number of cases this had resulted in enquiries being issued only to the firm which had previously supplied that type of product. If the quotation made in response to such an enquiry was subsequently returned because the purchaser felt it was too high the company issuing the quotation would quickly 'negotiate' an acceptable figure. The promptness of the reaction was based upon a desire to prevent the buyer sending the enquiry to other firms in the trade.

The Trade Union position was somewhat stronger in the engineering companies but again there were a few executives who boasted of the fact that there were no unions in their plant.

Links with professional institutions were also a little stronger and many firms had established contact with the Small Business Centre at the University of Aston and had received some assistance from the Centre.

None of the firms visited in either industry saw the Prices and Incomes Board as a contraint either on prices or wages.

It was clear, therefore, that while there was a marked difference in the age, size, and owner-management profiles between firms in the two industries almost all the chief executives displayed the decision making characteristics of the traditional entrepreneur and 'saw' themselves in that role. Despite the inter company trading which took place in both industries, most firms were concerned to maintain their independence within their particular trade.

The chief executives of the display firms seemed rather reluctant to recruit 'ideas' men who could relieve them of the need to maintain the creative dynamic themselves. This was one of the psychological growth problems in firms of this kind which very few firms seem to have overcome. Their opposite numbers in the press metal firms appeared to have passed, or avoided

that stage but still showed signs of over-involvement in the functional activity which had been their own professional skill, engineering.

In conclusion, therefore, it is possible to classify all those firms as small entrepreneurial type organisations with very few sophisticated managers and using relatively unsophisticated management techniques.

Chapter 4

Objectives

Having established the Entrepreneurial Charter of the firms examined in this study the next logical step is to consider the objectives which these firms, or their controllers, seek to attain. As a starting point it is necessary to accept that one of the basic assumptions upon which any prescriptive theory of the firm must be based is that the firm is, as Ansoff[34] says, "a purposive organization whose behaviour is directed toward identifiable end purposes or objectives." Since this thesis is concerned with the normative rather than the descriptive approach, the assumption was made that price decision making in the firm visited was directed toward some objective, or objectives, and that the first step in the analysis should be to identify the particular objectives concerned. While most contemporary economists and behavioural scientists do adopt this approach, and some go on to construct quite elaborate hierarchies of objectives[35], there are a few who question the need for this type of investigation. Machlup[36], for example, asks whether the assumption of profit maximisation within a theory of the firm will lead to conclusions which are significantly different from those which would have been derived using "more realistic assumptions". Wells[37] also, on the basis of evidence obtained from empirical research in New Zealand, argues that "the substitution of money profits for a composite of pecuniary and non-pecuniary rewards simplifies the analysis so much that the gain in expediency far exceeds the loss in applicability". He goes on to state that "the loss in applicability is less than might otherwise be supposed". Economic theories are not, however, based upon expediency and it was considered necessary to proceed with the identification of objectives before examining the pricing behaviour in the two industries investigated.

In small companies this identification process is made more difficult by the fact that only in exceptional cases are objectives formulated in writing. This does not necessarily mean that when objectives are thus presented they necessarily represent the entrepreneur's true objectives. The cavalier manner in which the chief executive of one of the few firms visited which had issued a formal statement of objectives ignored, or changed them suggested that they did not represent the true basis for his decision making. Gross[38] goes a little further by suggesting that "the art of bluff and deception with respect to goals is part of the art of administration". However, it is not suggested here that the chief executive of the company mentioned above deliberately set out to mislead his colleagues but simply that the objectives established were not as realistic and

meaningful as they might have been.

Where objectives are not written they may still be quite explicit and be communicated verbally to members of management. The same caveat applies under these circumstances as in those mentioned above, and it is essential that the validity of the statements made should be checked as far as it is possible.

There are, nevertheless, many small organisations where objectives are not formulated in an explicit way and thus cannot be communicated to other members of the managament team. This failure to be explicit may occur because the entrepreneur is unwilling, or unable, to expose his thoughts. In the former case an enquiry concerning objectives may produce a rationalisation which masks the true state of affairs whereas in the latter case the objectives have to be inferred from statements about the decision making process itself. In both cases the process of identifying objectives is extremely difficult, but still necessary, and useful.

The evidence arising from this investigation supports the argument put forward by many economists and behavioural scientists[39] that most firms have a multiplicity of objectives, but it was also clear that "in most firms the economic objectives exert the primary influence on the firm's behaviour and form the main body of explicit goals used by management for guidance and control of the firm[40] (Ansoff). Since the perceived number of objectives in a small company is rather limited, and the particular objectives which are relevant in this context are mainly economic or financial it was possible to simplify the conventional hierarchy of objectives into three categories,

(a) the basic long term objective, or purpose, of the business;

(b) the expressed, or rationalised, current objectives; and

(c) the objective which was dominant at one particular time.

(a) The basic, long term objectives

The basic long term objectives of firms in the display industry were established by relating the answers to specific questions on objectives to other statements about the decision making process and the statistical evidence obtained. The resulting conclusions were as follows:

D_1 : to maintain turnover and profitability,

D_2 : growth and profitability,

D_3 : to keep the firm going,

D_4 : to maximise profits,

D_5 : financial stability,

D_6 : to maintain turnover and profitability,

D_7 : growth and profitability,

D_8 : growth and profitability

D_9 : stability of turnover and profitability,

D_{10} : growth and profitability,

D_{11} : growth and profitability,

D_{12} : growth and profitability,

D_{13} : growth and profitability,

D_{14} : growth and profitability,

In the pressmetal working firms the long term objectives in 9 out of the 12 cases were concerned with growth and profitability. One company which had recently been taken over was "awaiting instructions"; another chief executive was unable to provide any clue about the long term objectives which his holding company had for his own organisation; and the final organisation, E_8, was fighting for survival.

In the larger companies there was some evidence of differentiation between the 'real' objective and those which were published for use by company executives. Alongside the survey of small companies in the two industries concerned a questionnaire (see Appendix 2) was sent to approximately 1500 industrial firms located mainly in the Midlands. The response rate was about 4% which is fairly normal for this kind of enquiry, and some of the firms who did respond indicated their willingness to answer further questions. These were subsequently visited and it was interesting to find that almost one half of these were quite open about their desire to maximise profits.

Statements made by these firms included:-

"It is clear to the managing directors of companies in the group that the objective is to make as much profit as possible in the long run".

"Our objective is clearly to maximise profits, normally through maximisation of turnover".

"We aim to maximise profits".

"There is no question about it, you try to make as much profit as you can".

One rather qualified comment was,

"We Mustn't make too much profit otherwise the Monopolies Commission will be after us and we have had enough trouble with them already".

B. W. Denning[41] quotes the interesting case of a Swiss watch company where the 'purpose' of the company was given as "To operate a profitable business which meets the financial needs of the family and maintains family control".

This information again may hardly be regarded as conclusive but adds a little more depth to the impressionistic pattern emerging.

(b) **Expressed, or rationalised, current objectives**

This second class of objectives embraces those explicit statements made within a company as a means of directing and coordinating activities by members of the management hierarchy and, subsequently, of measuring their performance. Such statements, whether verbal or in writing, are usually expressed in terminology familiar, and acceptable,to people in the organisation.

None of the firms visited in the display industry had committed its objectives to papers, and two of these, including one of the largest companies, actually said that they did not have any objectives. Further questioning revealed that in the larger company this was not really the case but in the smaller one it was obvious that no constructive thought had been directed to this question for some considerable time.

To amplify this point it is useful to examine the position of individual firms in the two industries.

i.) One of the two smallest display companies visited, D_1, was the Birmingham branch of a firm whose head office was situated some distance away. The branch employed 10 people including the General Manager and was directed, and controlled, by the

parent organisation in such a way that the General Manager appeared to have little influence on the objectives set and, in fact, had no knowledge of them. His own objectives were to maintain turnover and profitability which must, presumably, have been acceptable to the parent company as the basis for operating.

ii) The second of the smallest companies visited, D_2, employed only nine people in addition to the Managing Director although the number employed had once been as high as 14. When questioned about the firm's current objectives the Managing Director replied "If I can retain £1,000 after tax from a turnover of £30,000, I am satisfied". In the previous financial year his 'retention' had been £500 on a turnover of £28,000, which he had found rather disappointing. The figure of £1,000 represents a return, after tax, of just over 22% on the issued share capital of £4,500.

iii) Company D_3 was owned and directed jointly by two people. The original intention had been "to build a business for their respective families" but the children had apparently been uninterested in this prospect and the partners now stated that they "had no objective". During the discussion one of the partners said that they hoped to achieve the same turnover and profit as they had made the previous year. Unfortunately costs were increasing and the amount of profit was being whittled away, but they were aware of this and expected it to happen.

iv) D_4 was a second generation company whose Managing Director had little knowledge of the industry when he took over the firm. There appeared to be no doubt in his mind that the objective of the company was "to make as much as you can".

v) The objective stated by the other prewar company, D_5, was to achieve a profit of 20% on turnover after tax. This was further qualified by a desire to make a little more profit than 'last year' but also by a determination not to grow because "to grow we would have to specialise and we don't have enough space. This problem of space prevents us from doing fine screening work because of the dust that flies about from the carpentry section".

vi) D_6 was a wholly owned subsidiary of a group with headquarters in London, and the objectives were formulated by the General Manager but agreed by the Main Board of Directors. For 1968 the objectives had been agreed at £60,000 turnover and a profit of 10% net after tax.

This is approximately the same for 1967 when the turnover was £62,000 and the profit £6,000.

vii) Another of the smaller companies, D_7, had an objective of £65,000 turnover, and a rather higher profit of 25% on turnover, before tax. This also was similar to the previous year's turnover and there appeared to be no significant attempt to achieve an increase in sales despite the additional production capacity available in the firm.

viii) In D_8, short term financial objectives were given as £80,000 turnover and a profit margin of 10% on turnover, before tax. In this case objectives were incorporated in the budget which was seen by all the partners in the firm.

ix) D_9 was one of the companies investigated which was established prewar. The objectives for the current year had been set at £195,500 turnover to yield a profit margin of 15% net, before tax, on total cost.

x) The current objectives for D_{10} varied slightly from the pattern outlined so far in that they were formulated as changes on previous figures. Thus one objective was to increase the number of employees from 45/50 to 75 in three years. Another was to increase turnover by 25/30% per annum, and a third to achieve a profit margin of 25% on turnover, before tax.

xi) One of the larger companies D_{11}, was rather less precise in its objectives and simply aimed at a profit of 15% on total cost, before tax, and a higher turnover to utilise spare production capacity.

xii) Company D_{12} was also one of the organisations who were less precise in their answers and gave the objectives as "profit, but we don't aim at a particular percentage", and "to continue to increase turnover at 10–20% per annum".

xiii) D_{13} was quite explicit in its formulation which was to "double turnover in five years and to achieve a profit of 10% on turnover, before tax".

xiv) D_{14} is also in the display industry but has its head office in the West of England. The company is made up of three units, one of which incorporates the head office, a 'production' unit is located a few miles away, and an associated company operates in the North of England.

In this case also the objectives of the company were not written down but were reviewed each year at the Annual General Meeting. The original objective, which was

"to provide a service where one did not exist", had now given way to "a little more profit than we made last year". The profit objective was related to a specific turnover figure and to a forecast of variable costs and overheads for the ensuing year. The overall profit objective was set at 22% on turnover with a target of £240,000 turnover. Profit before tax will thus be approximately £52,8000, which, on a total of £45,000 capital employed represents a return of well over 100%. Equity capital was approximately £35,000 with the profit margin showing an even more handsome return.

Only in one case, that of D_5, was there evidence of capacity being fully utilised. In the rest of the companies information about the fluctuations in numbers employed suggested that at the time of the investigation, during 1967 and early 1968, most firms were operating well below 75% of capacity.

xv) S_1 was a small specialised printing company located in the Midlands which employed some 35 people and supplied many of the display firms with printed and photographic items for incorporation in their displays. It was a first generation firm registered in 1957, and one in which the Chairman was the major shareholder. Like many of his customers this Chairman came up 'through the ranks' and was a highly skilled craftsman. When this company was first established the basic purpose, or objective, of the founder was 'to become his own boss'. He was aware of the opportunities existing in the market, and set out to exploit his knowledge of the printing industry and his skill in certain aspects of the work. The success of the company during the intervening years had satisfied his original objective and the focus of attention had moved to the scope for expansion. This was further crystallised by setting an objective of at least £5,000 per annum profit from a turnover of approximately £60,000. This represented a return of 25% on capital employed and 66% on issued share capital.

The situation in the press metal industry was a little different. Again none of the press metal firms had issued its objectives and policies in any formal written form but all those companies which were wholly owned subsidiaries had written objectives into the forward budget which was subsequently approved by the parent organisation. One other company had written its objectives into the budget for the ensuing year: The remaining five firms had no written statements of objectives of any kind at the time of the investigation. One of these latter five concerns had issued a written statement of

objectives some time previously but had discontinued the practice because of the rapid turnover of managerial staff; two others were actively developing a more formal financial system which would eventually incorporate financial objectives, but the remaining two were "not bothered".

But although only seven of these firms had written down their current objectives, all of them could, when visited express their objectives in specific terms.

These objectives were:–

E_1 To "keep output steady at £60,000 per annum and to make a profit margin of £10–15,000, before tax".

E_2 "Profit required 15% on capital employed at replacement cost: £18,000 i.e. £15,000 from cost centres plus 10% Return on Material – £3,000. Contribution to Profit Rate £/hour .325."

E_3 10–12% profit, before tax, on a turnover of £200,000.

E_4 10% per annum increase in turnover.

A profit margin of at least 7%, after tax, on capital employed, i.e. £15,000, before tax, on £130,000.

Turnover during the current year of £300,000.

E_5 To maintain turnover at £175,000 and to obtain a return of 20%, before tax, on a capital employed of £85,000 i.e. approximately 10% on turnover.

E_6 To make a larger turnover and profit than in the previous year.

E_7 A profit of 25% on capital employed of £100,000 representing 10%, before tax, on a turnover of £250,000.

E_8 15%, before tax, on a turnover of £250,000.

E_9 33.1/3% profit, before tax, on capital employed and a turnover of £500,000.

E_{10} To improve slightly on the previous year's figures which gave a return of 12½%, before tax, on a turnover of £500,000.

E_{11} To increase turnover by approximately 10% per annum and to achieve a profit margin of 15/20% on total cost.

E_{12} To achieve a turnover of £50,000 and a profit margin of £30,000, before tax.

S_2 S_2 was a small metal merchanting firm included in the survey because it supplied many of the press metal working firms with their raw materials. The turnover per employee of this company was very much larger at £25,000 than in the other firms

because, in this case, the cost of the materials involved amounted to approximately 96% of its turnover. Although it employed only 120 people its turnover was thus around £3,000,000. Objectives in this company included a return of 20% on capital employed and a turnover of £4,000,000 per annum.

Information concerning objectives was also obtained from four large organisations, C_1 to C_4, who were both customers of the display firms visited and competitors in the sense that there was a department within each of these firms which provided a similar kind of service. In all four cases the Manager of the department concerned was very much involved in purchasing merchandising and display work from outside organisations. The objectives of these departments are given below and highlight the emphasis placed upon quality and delivery and the relatively slight importance attached to price.

C_1 To meet the extra, urgent, demands of the company with speed and creative quality and to facilitate the task of marketing the company's products. To stay within the departmental budget.

C_2 To meet the urgent demands of the various companies in the group and to maintain the quality image of the company through its display work. One further comment made by the company's Commercial Director is of relevance here. In discussing purchasing he said "it really doesn't matter whether you get it cheaper or not so long as no one else does". While this may apply in purchasing generally it did not appear to operate in the display units; there the question of prices from outside suppliers is considered very carefully and where a price appears to be higher than expected the matter is discussed at length with the supplier concerned.

C_3 To cater for all the display needs for all the firm's branches.

C_4 To provide the companies within the organisation with a first class exhibition service in any part of the world, and to promote the companies' products.

A number of large customers of the press metal firms visited are included in those covered by the questionnaire below. Most of these large customers are involved in engineering in one form or another and are thus able to calculate fairly accurately what a particular article should cost. Because of the competitive nature of the market in which these companies operate a great deal of emphasis is placed upon cost reduction and thus upon price consciousness in purchasing.

A comparable company in the Building Industry

B_1, the company involved in the Building Industry and chosen for comparison purposes employs 150 people, is also located in the Midlands. It was originally part of a much larger company but seceded from it in 1959 to avoid unwelcome intervention in its affairs. Until 1966 company objectives were formulated at Board level and communicated verbally to senior executives by the Managing Director. In that year, the Managing Director decided that this was no longer satisfactory and issued a written statement setting out main company objectives and policies. These were presented, and discussed, at a special one day seminar and the following extract is taken from a document circulated then.

"The overall objectives of the company can be broken down under two headings, Technical and Human, and both can be expressed in terms of the immediate future. We will call them **Long-term** and **Short-term.**

Technical

First, then, the technical objectives –

Long-term

Growth

Profitability

Stability

Public Company (to become a . . . . . .)

Short-term

1. **Growth**

   The Directors wish . . . . . to see a growth of not less than 14% per annum in profit.

2. **Profitability**

   We desire . . . . . in the short term to see a return of not less than 22½% on capital employed.

3. **Stability**

   . . . . . We should endeavour to plan for the Company to be able to withstand seasonal trends in business, to be able to withstand the effects of political manoeuvres which might upset one particular industry. One answer to this may be diversification and it is for this reason that I am stating one of the Company's objectives is to diversify.

4. Public Company

The next long term objective mentioned was public company. We have done very well over the past few years in raising money in order to increase the Company's growth but one cannot for ever continue raising loans from the bankers or finance houses as it may well upset the gearing of the Company.

Human

The Company's objectives on the human side are –

Long-term

1. To make B_1 a good company to work for
2. To provide opportunities and training

Short-term

1. To improve working conditions within the Company
2. To make employees feel they are wanted in the organisation."

A profit of 22½% on capital employed in B_1 represents approximately 9% on turnover and 45% on share capital (issued).

This was an interesting example of the way in which the original spoken objective of "22½% on capital employed" is expanded to include other economic and non-economic objectives ehen committed to paper. The relationships between the various objectives given are obviously not made clear but will, over time, go through a process of clarification and refinement which will enhance their usefulness, a usefulness which was obvious within a very short period.

The third category of objectives mentioned above is concerned with the solution to immediate, short-term, problems of indirect, rather than direct, relevance to the long-term and rationalised objectives.

(c) **The dominant objective**

One of the most significant differences between the immediate, and dominant, objective and the 'basic' and 'rationalised' objectives became apparent when analysing statements made by the founder members of companies in both industries concerning their desires at the time they started in business on their own.

The replies given by the founders of firms in the display industry were as follows:

i "To make a reasonable living and escape from the authority of other people"

ii "To build a business for our respective families". (Two partners).

iii "To have my own business, be my own boss".

iv "To exploit a growing market myself".

v "To start on my own; not to work for others".

vi "To take advantage of a growing market after the war".

vii "To provide a service where one did not exist".

viii "To be one's own boss".

ix "To get away from the interference of the parent company in our affairs.

Only one pressmetal firm had been established since 1946. Its chief executive spoke of his original desire to "run his own show" and to use the knowledge and experience he had gained previously for his own benefit.

This kind of analysis is a part of the study of organisations which has attracted the attention of so many behavioural scientists in recent years. The result of this interest has been the development of new analytical tools with which to examine the sort of information contained above, and in this context the March and Simon model [42] of factors influencing organisational behaviour provides a useful conceptual framework within the category of job satisfaction for analysing the content of these replies. Most of the environmental constraints are contained within the sub-sections of

4.8 compatability of job and other roles, and

4.7 predictability of job relationships.

The third sub-section 4.6, which is concerned with the conformity of the job to the self-image, is further subdivided into

i education and aspiration levels;

ii rewards and inducements;

iii participation and control;

iv personal satisfaction; and

v acceptability of supervisory practices.

Aspiration levels are clearly linked to long term personal objectives whereas the other factors are concerned with the short term inducement conditions. Within the answers quoted above it is possible to distinguish six statements which may be classified under 4.6 i, that is a long term economic aspiration. There are a further six statements concerned with participation and control and may be classified under 4.6 iii. These may be interpreted as saying "we want

to be able to do what we want to do, without interference from other people". Four of these statements are linked to others in 4.6 i but two of them did not specify what it was they wanted to do. There is one statement which, taken at face value, may be placed in the philosophical category of disinterested action. Answers to questions about present objectives and pricing decisions confirmed that this was not wholly true and that there was a substantial element of self interest present.

There was one other statement by a firm in this latter industry which may be included under this heading. When questioned about his own desires the Managing Director of E_6 expressed a wish "to be taken over" at sometime in the not too distant future. This statement may also be included under 4.6 iii above but in a negative rather than positive sense, i.e. of wishing to dispose of responsibility and control and not to acquire it.

The dynamics of the market place combined with the unpredictability of Government economic policies also generate situations in which the immediate attention of the entrepreneur is diverted from the other two aspects of objectives discussed above. Questions concerning company objectives were often met initially by a statement of what the company was most interested in achieving at that point in time. D_2, for example, was extremely anxious to increase sales in order to utilise the excess capacity which had been available since the firm moved into the new premises three years previously. The original accommodation had comprised approximately 1000 sq. ft. of floor space whereas the new premises had 10,000 sq. ft. The chief executive of D_4 was disturbed by the absence of a capable person to whom he could delegate some of his responsibility, but had made no effort to recruit and train someone of this calibre because of the cost involved. D_5 was under pressure at the time of the visit and was bothered by the lack of space for drying and storing the products. The faster growing companies were concerned continuously with the problem of liquidity and B_1 was becoming increasingly aware of the management problems involved in its planned expansion over the next few years.

These are natural reactions to environmental conditions but have to be borne in mind when attempting to relate what people do, and say, to the theoretical basis for decision making embodied in a theory of the firm.

The Survey by Questionnaire

To obtain additional information about the objectives and policies established by companies of various sizes and pursuits a questionnaire was sent to 1500 companies located mainly, but not entirely, in the Midlands. This produced 61 effective replies, a response rate of approximately 4%, which (as noted before) is normal for this type of enquiry.

The total of 61 firms replying consisted of:

a.) 19 companies employing between 1 – 50 people

b.) 14 companies employing between 51 – 250 people

and c.) 28 companies employing between 250+ people

Not all the returned questionnaires were fully completed. Some firms refrained from answering questions on financial objectives because they felt that this information was confidential and could not be disclosed. Nevertheless an analysis of the responses provides a useful basis for comparison. Among the 'refusals' was one gentleman who was fully prepared to co-operate "on receipt of a cheque for five guineas".

19 of the 61 companies reported that a written statement of objectives and policies was issued in their organisations. The size of the companies issuing written statements was:–

Table 1.

	1–50	51–250	250+
Companies issuing written statements of objectives and policies.	4(21%)	1(7%)	14(50%)

Despite the small number of responses the significance is fairly clear, the incidence of written statements of this kind is greater in the larger company than in the smaller one. It was interesting to find so many companies in the larger group which still did not prepare a document setting out their objectives and policies in this way; one such firm employed over 2000 people and and another over 3000 people.

The second question asked concerned long term objectives and the proportionate distribution of responses among the five categories used are given in the following table.

Table 2

Long-term objectives	Number of employees 1–50 % responses	51–250 % responses	250+ % responses
Growth	37	57	61
Profitability	74	86	61
Stability	31	28	25
Continuity	42	43	11
Other	0	7	7

It will be obvious from the figures that the categories are not exclusive and a certain amount of duplication is involved. However this does not obscure the emphasis which is placed upon particular categories within the size groups. The smaller companies place the greater emphasis upon 'profitability' and 'continuity' whereas the larger companies emphasise 'growth' and 'profitability' in fairly equal proportions.

Within the questionnaire, short term objectives were classified under two headings, financial and marketing. Spaces were provided against each category under both of these headings for respondents to indicate more precisely the nature of their objectives. The evidence obtained, although not complete in all respects from each respondent, is sufficient to indicate the relative significance involved and the range of objectives stated. The proportion of responses specifying each category is given in the following table.

Table 3

Short-term objectives	Number of employees 1–50 % responses	51–250 % responses	250+ % responses
Financial			
Return on capital invested (equity)	16	14	11
Return on capital employed	37	57	82
Return on turnover	47	28	21
Return on value added	5 (1 coy).	0	0
Marketing			
Share of the market	16	28	39
Turnover (value)	47	72	36
Increased percentage turnover	10	14	4

Again the figures indicate a certain amount of overlap. In the case of the financial objectives overlaps were few and mainly due to 8 companies linking a return on capital employed with the appropriate return on turnover. Two of these companies were in the 1-50 group, 2 in the 51-250 group, and the remaining 4 companies in the larger size group. In the case of marketing the overlap concerned only 6 companies, 4 of whom linked the market share percentage with an actual turnover figure.

The significance which the small companies attach to a return on turnover clearly gives way to a concern with capital employed in the larger company. In the same way in the marketing area there is a change of emphasis from turnover to a specified share of the market.

The range of profit objectives given in response to the questionnaire, when figures were provided, was as follows:

Table 4

	Size of Company		
	1–50 Range	51–250 Range	250+ Range
Growth	–	–	6%
Return on capital employed	15–60%	14–33.1/3%	15–30%
Return on invested capital	15–100%	18–20%	15%
Return on turnover	7–18%	10–12%	10–15%
Return on value added	40%	–	–

A return of 20% on capital employed was a 'popular' objective with the larger companies and was quoted by six out of the twelve firms who provided such figures. The larger firms also appeared to be a little less ambitious than the small ones with respect to their objectives.

It was interesting to compare some of the responses to this questionnaire with those received from the same firms in an earlier investigation conducted by the Industrial Administration Research Unit, The University of Aston in Birmingham and concerned with the structure of organisations. In the I.A.R.U. investigation firms were asked to state the 'operational goals of the organisation'. There was no specific request to divide these into the kind of categories shown above and hence the responses were rather general. Of the 41 industrial firms in this I.A.R.U. study employing 250+ people, 16 (39%) mentioned profitability but no firm indicated the criteria to which it was related, that is, capital invested, capital employed, turnover, and/or value added. Six companies mentioned turnover or share of a particular market as an objective, twelve were

concerned with quality, ten with providing a service to the community, and two firms were interested to "maintain independence and the historical family connection", in the words of the interviewer.

The difference in the objectives stated in the two surveys indicate the problems facing investigators in this area with firms who have not yet issued written statements of their objectives, but who are prepared to rationalise when questioned.

Firm 1.

I.A.R.U. Survey: To make the *maximum* profit consistent with fair trading and the provision of very good conditions of employment for workers.

This Survey: To *maintain* profitability in relation to capital employed and to maintain turnover.

Firm 2.

I.A.R.U. Survey: To maintain an *equitable* level of return on capital.

This Survey: To increase production to full capacity and to *maximise* return on capital employed.

Simulation Exercises

During the period covered by the survey a number of simulation business management exercises were carried out, some within large industrial organisations and some at the University of Aston with the Executive Development course which consists of seniors managers with similar responsibilities from small companies and 'middle' managers from large companies in the Midlands; and with students undertaking postgraduate courses leading to a Master's degree. Two models were used, the first was a 'manually' assessed exercise[43] and the second a computer exercise.* Both models operate at the 'control' level where participants are required to take decisions concerning plant investment, production scheduling, hiring and controlling the sales force, advertising expenditure, pricing, and various items of incidental expenditure. Participants are required to produce a statement of their objectives and policies during the exercise and there is an analysis of the decision making which occurred within that framework during the evaluation session at the end of the exercise.

* This is a computer exercise designed by the writer for use with the Elliott 803 and based on a model produced at University College of Los Angeles (U.S.A.)

The main characteristics of both models are similar to many of the small companies covered by the survey. Each company in the exercise is 'owned' and 'managed' by the same group of individuals. There is, therefore, no split between ownership and management as there may be in a larger real organisation. There are a limited number of competitiors, usually between three and five companies, and a larger, but still limited, number of customers. Some product differentiation does occur based upon a qualitative factor rather than on diversification. Prices are not regulated in any way and it would be unwise for any one company to assume that his competitor's price policy is independent of his own. Competitor's prices are communicated to all companies participating.

Statements of company objectives submitted by participants in forty-five companies over ten exercises show a dominant concern with profitability. The proportion of responses in the various categories is as follows.

Growth/expansion	17%
Profitability	75%
Stability	4%
Continuity	0
Other	0

Statements involving profitability were distributed as follows.

Return on capital invested	30%
Return on capital employed	33%
Return on turnover	12%
Return on value added	0

Marketing objectives were mainly concerned with establishing a particular share of the market and were classified in the following way.

Share of market	45%
Specific turnover	3%
% increase on turnover	21%

Experience in well over a hundred such exercises, involving over four hundred groups of participants, supports the evidence presented above. It is interesting also that exercises in particular companies or with particular groups of people clearly highlight the dominant characteristics of the situation. In a real production-oriented company the exercise groups quickly get into

trouble with excessive inventories; in a company very conscious of the need for research and development, exercise groups spend much more money on this activity than the situation warrants, and considerably more than they can afford. Groups of like individuals also tend to reveal fundamental traits in their approach to decision making; accountants, for example, are precise in financial control and excessively (and dangerously) conservative in their attitude to expenditure on advertising or sales promotion; production managers are dominated by a desire to increase capacity in order to obtain economies of scale and thereby reduce the cost per unit of the product regardless of the market situation.

Conclusions

The evidence arising from the various sources indicated above may be summarised in the following way.

Basic objective or purpose

In the small company the responses suggest the major aspiration is economic and related to the long-term rather than the short term.

This agrees with, and supports, the evidence obtained by D.C. Hague[44] and Professor B. Fog[45] cited above. Similarly in some of the larger firms, interviewed for comparison purposes, there was little hesitation in saying that the main objective was profit maximisation although this was rarely issued in written form.

Rationalised objectives

The emphasis in statements made from all the sources and sizes of firms under this heading was clearly on profitability. There was, however, an interesting change of orientation within this category; small companies appeared to be primarily concerned with profitability related to turnover whereas the larger companies related profitability to capital employed. The simulation exercise statements emphasised both return on capital invested and capital employed.

Although short term objectives appeared to be much more precise than those for the long term it was interesting to note that many chief executives looked upon these as the minimum levels to be achieved; in practice the real objective was to obtain as much profit and/or turnover as possible.

There was also an interesting change in emphasis in categories other than profitability. In the postal survey the second most significant category for small companies was

'continuity' and the third was 'growth'. In the larger company 'growth' was equal in emphasis with 'profitability', and 'stability' was third with 'continuity' fourth. This increasing emphasis on growth reinforces the point made by R. Marris[46] that growth is often substituted for the profit motive in large organisations.

The objections raised by behavioural scientists concerning the nature of the objective incorporated in the traditional theory of the firm often ignore the differentiation made above between the basic objective, the rationalised objectives, and the dominant one. The basic objective is rarely specified in smaller companies and is, therefore, difficult to identify. Nevertheless by careful questioning it is possible to obtain a reasonably accurate impression of this motivating factor. Certain types of decisions follow logically from this basic drive; these are identifiable and appear later in this thesis but do support the conclusions drawn above.

The argument for a multiplicity of objectives is immediately relevant when it becomes necessary to expand the simple coordinating basis of decision making. Thus as the organisation grows and decision making is delegated it is necessary to enlarge upon the original principle and delineate the subordinate objectives a little more clearly. These subordinate multiple objectives pinpoint many of the constraints within which the original purpose has to be achieved and frequently represent an explicit rationalisation of enlightened self interest. At particular times one of these subordinate objectives may become dominant because circumstances contrive to make it so, but should always be related to the basic purpose. The conflict which arises in many organisations is due to a failure to relate the subordinate objectives to the basic one because the latter is not made explicit.

It seems, therefore, that there is no fundamental conflict between the concept of a single dominant economic objective and that of a number of objectives. The appropriateness of the of the concept used depends upon the size of the organisation and the nature of the decision making framework; and, in the larger organisation, whether one is concerned to identify objectives at different levels of operation.

Chapter 5.

The nature of policy

Once the motivational basis of decision making had been established the next step in the investigation was to determine the policies which formed the guidelines within which decisions should be taken to achieve these objectives. However there is still a considerable amount of confusion among managers and academics about the nature and purpose of policy. This situation is not made any easier by writers from both categories who fail to distinguish clearly between the 'ends' and the 'means' by which those ends may be achieved. Charles L. Jamison [47] writes, for example,

"The main objectives of a business constitutes its general policy". If, as Mr. Jamison says, the main objectives of a business constitute its general policy it hardly seems worthwhile confusing the issue by using two terms where one would suffice.

Newman and Logan[48] help to clarify the situation a little but still leave the reader unsure of the precise nature of policy. They write,

> "Certain major issues confront the central management of every company. Time and Time again the questions about product line, pricing, purchasing, wages, and similar basic matters arise. Policies give central management's standing answers to these questions. Policies indicate how these recurring problems are to be resolved so as to attain basic objectives".

This, at least, makes the point that policies provide the means by which the company may achieve its objectives. It still does not make clear the fact that policies provide the guidelines within which executives should take decisions and thus clarify the tolerances within which he is able to use his own discretion. Wilfred (now Lord) Brown's[49] definition is rather more precise and helpful. He writes,

> "Policy defines what people must or must not do, and thus delineates the area over which they must exercise their own discretion".

The point was made earlier that explicit statements of objectives and policies may not be necessary when the decision making process resides in one person. Even in this situation, however, an explicit formulation may become necessary when the decisions taken are clearly inconsistent with one another.

The second set of circumstances in which explicit formulation becomes necessary is when pressure of work results in the delegation of some aspects of decision making to subordinates.

It then becomes necessary to indicate the thought patterns, or guidelines, within which those decisions have been taken previously, in order to preserve co-ordination of effort within the company.

There have also been occasions in the history of this country when the State, for economic ends, or the Church, on ethical grounds, has considered it necessary to issue guidelines for businessmen concerning the pricing of products in the market place and the level of wages paid to employees. In both respects, however, such proclamations were intended to ensure conformity within a narrower band of tolerances and not to broaden the basis of decision making for motivational purposes.

The idea of establishing guidelines for decision making at subordinate level is not new but the deliberate extension of this principle to stimulate motivation and involvement is a significant deviation from its previous role and is in harmony with the job enlargement approach now being propounded by some American industrial psychologists. As society becomes more affluent and managers more sophisticated it becomes increasingly difficult to motivate individuals by means of monetary rewards. Cyert and March[50] emphasize this trend towards what they call 'policy side payments' and state, "In fact, an organisation that does not use such devices can exist only in a rather special environment". They also draw attention to the fact that Trade Unions have become so aware that they now frequently include such items in their demands for a 'package deal' from employers.

Written policy statements.

Marvin Bower,[51] sometime Managing Director of McKinsey and Company Incorporated, distinguishes three advantages which may arise from the process of putting policies into writing. In the first case written policies are communicated more easily and more accurately to all concerned. Secondly, he states "putting anything in writing enforces more thorough and precise thinking". The third benefit derives from the circulation of "written drafts to those who should participate in formulating policy and to some of those who will be affected by it . . . . ". A wider range of knowledge and intelligence will thus be brought to bear upon the task and will improve the quality of the finished product.

Businessmen seem just as reluctant to commit policy statements to papers as they are to specify company objectives. Discussions with senior executives during the survey suggest that this reluctance is based upon a feeling that once such statements were made they would feel obliged to adhere rigidly to these. Lord Brown[52] feels rather differently about this and argues that "written" policy tends to be more flexible and easily changed than unwritten policy". This is an interesting

conflict of opinion but, unfortunately, not one which it was possible to resolve within the framework of this survey. But while there may be many reasons why an explicit statement of policy may seem necessary, and many situations in which efficiency might be improved, it is important to realise that it may not always be appropriate. In a family organisation, for example, it may be possible to avoid open conflict between personalities by dispensing with explicit formal statements of this kind; and in the very small firm it is often unnecessary and rather pedantic to be thus explicit. When it is necessary, however, for whatever reason, the statement should be brief, relevant, and clear.

Statements of policy circulated within an organisation are not always as lucid as they might be, and those published in the national press as a part of the company's annual report are frequently even less clear.

Confusion of this kind may subsequently lead to embarrassment when decisions taken in one part of the organisation do not conform with the company's basic philosophy. It is important that this philosophy, and the ethical principles involved, should be clearly distinguishable within the policy structure. Nevertheless there will undoubtedly be situations which are not covered by a company policy document and there should be a systematic way in which events of this kind are reported by company employees[53]. It should also be made clear that such reports should be accompanied by suggestions concerning the appropriate guidelines to be set from people at all levels in the management heirarchy. Company policy does not always originate at board level but senior management is, nevertheless, responsible for ensuring that the philosophical basis of behaviour in the company is maintained and that the overall policy structure of the company is consistent.

Types of Business Policy.

Policies are usually classified under the functional type headings used to identify areas of activity within the business organisations. Thus Jamison[54] lists

(a) expansion policies,
(b) public relations policies,
(c) sales policies,
(d) purchansing policies,
(e) personnel policies,
(f) financial policies,
(g) accounting policies,
(h) production policies,
and (j) research policies.

This is a useful framework for describing the kind of activity with which the policy is concerned but does little to identify the level in the organisation at which the policy is operative. Ansoff[55] uses a different framework of reference and, under the broad title of business policy identifies three categories of decision making, namely strategic, administrative, and operating. Strategic decisions are those concerned with the relationship between the organisation and its environment. These establish the policies within which the company should operate and the subset of relevant and coherent goals necessary to achieve its basic objective. Policies set at the administrative and operating levels are usefully classified under activity headings similar to those quoted above and provide a framework for executive decision making designed to achieve the subset of 'rationalised' objectives specified. The 'Company Policy Document' reproduced in Appendix II of Lord Brown's book[56] is an excellent example of an administrative policy statement.

Koontz and O'Donnell[57] also emphasize the need to distinquish 'layers of policy'. "Thus, major policies beget derivative policies to guide the decision making of subordinate managers. A policy may, thus be as broad and major as that of financing growth from profits and as minor as the derivative policy of having foremen show economic justification for additional manpower to their superiors". The authors go on to illustrate the 'Hierarchy of Policy in Product Development' which includes the following items and again resembles the pattern shown above.

Basic company product policies

(k) Research policies
(l) Marketing policies
(m) Financial policies

(k) i Product research policies
ii Marketing research policies
iii Process research policies

(l) i Marketing channel policies
ii Advertising and promotion policy
iii Sales policies

(m) i Profit policy
ii Investment policy
iii Inventory policy

This survey is mainly concerned with those policies which fall within the marketing category, and in particular with price policy. But before proceeding to examine price policy in detail it is necessary to see its relationship to the other elements in the marketing mix. Since Chamberlin's explicit recognition of non price factors in the demand equation, marketing

scientists have added considerably to the number of variables, both internal and external to the firm, which need to be considered. Kotler[58] provides a useful framework of analysis by classifying these 'demand variables' under four broad headings

(n) Consumer variables: These variables concern population, income, motivational purchasing habits etc.

(o) Environmental variables: These are also external to the firm and cover legislation, economic activity and the effects of natural phenomena.

(p) Competitive variables: This category is related to the activities of competing companies.

(q) Marketing decision variables: These include any factor within the control of the firm which may be used to stimulate sales. Obviously the emphasis upon particular variables within this group will depend upon the nature of the product and the analysis of items under (n), (o), and (p) above but the more important variables are included in the following list.

(i) Advertising and publicity
(ii) Price, terms, and credit arrangements
(iii) Personal selling
(iv) Distribution channels
(v) Packaging
(vi) After sales service
(vii) Product mix
(viii) Physical distribution.

Not only have these other factors been added to the 'internal' section of the demand equation but it would appear that price has also lost its position as the item of greatest importance. Jon Udell[59], in a survey of 200 producers of consumer and industrial goods, found that pricing ranked sixth (6th) in the table of "key policies and procedures common to successful marketing management in various manufacturing industries". The leading item in this table concerned research and development and clearly identifies the emphasis which is now being placed upon product and process innovation among successful companies.

Udell's list of key policies in rank order was as follows

Product research and development
Sales research and sales planning
Management of sales personnel
Advertising and sales promotion
Product service
Pricing
Organizational structure
Distribution channels and their control
Marketing cost, budgeting and control
Finance and credit

Finance and credit
Transportation and storage
Public relations

The information obtained from the present survey, and from responses to the questionnaire, was focussed rather more narrowly on the emphasis which the producer throught the customer placed upon quality, delivery, price, and 'other' factors. Details of the relative significance attached to the various items are given in the following tables.

(r) Firms employing more than 250 people.

Table 5.

	Order of importance				
	1	2	3	4	5
Quality	4	5	4	0	0
Delivery	0	3	4	4	0
Price	8	0	2	2	1
Service	2	4	1	3	0
Other i.e. Technical background, showing you really care, etc.	0	0	1	1	1

(s) Firms employing between 50 and 250 people.

Table 6.

	Order of importance				
	1	2	3	4	5
Quality	6	4	2	0	0
Delivery	2	3	6	2	0
Price	8	4	0	1	0
Service	4	0	2	6	0
Other	0	0	0	0	0

(t) Firms employing less than 50 people.

Table 7.

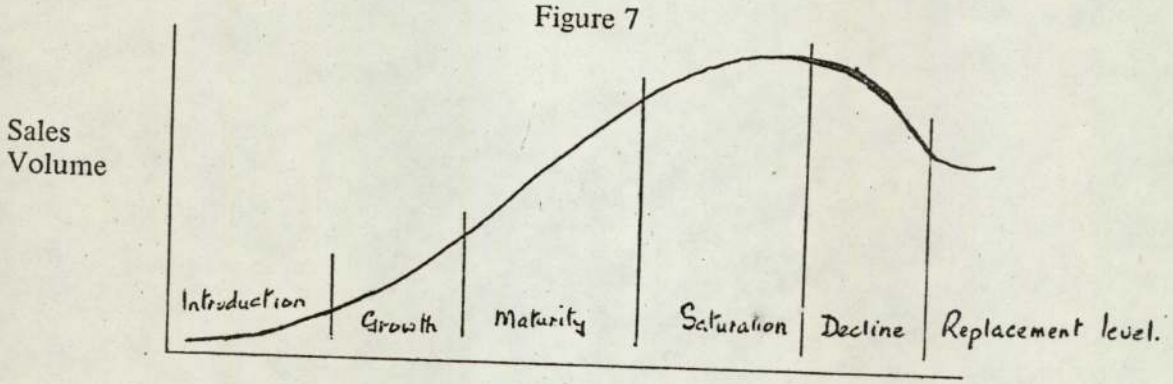
	Order of importance				
	1	2	3	4	5
Quality	13	8	6	3	0
Delivery	3	15	7	2	0
Price	9	3	8	7	0
Service	5	4	6	3	0
Other	0	0	0	0	0

Tables (r) and (s) indicate that the larger firms allocate a greater importance to price than any other factor with 'quality' taking second place. In the small companies this is reversed so that the emphasis rests clearly on quality with price moving into second place.

It was interesting that in Udell's survey 50% of the firms responding included pricing as a key policy area. In this survey 57% of the larger firms, 40% of the medium sized group, and 30% of the small firms responding to this question quoted price as the dominant factor.

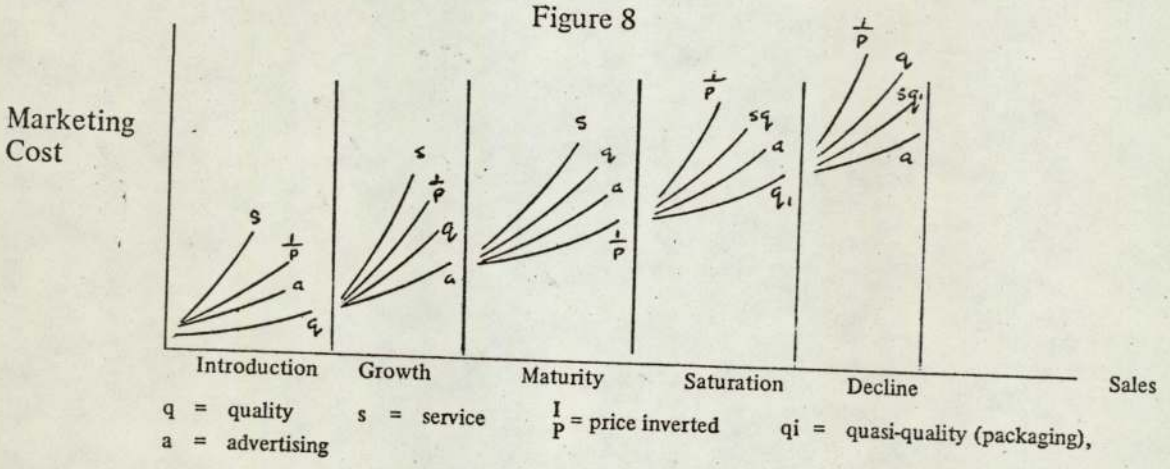
It should be remembered, however, that the relationship between these variables is not fixed. One of the most significant reasons for changing the marketing policy for a particular product over time is the way in which the market structure changes during the life cycle of that product. The typical life cycle for a consumer durable good may be illustrated as follows

Figure 7



Gosta Mickwitz[60], the Swedish economist, illustrates the changing elasticities of five marketing variables during the changing life cycle of the product one of which is price, in the following way

Figure 8



In the model demonstrated by Mickwitz it would appear that price sensitivity is low in the introductory and growth stages of the product life cycle. Price sensitivity appears to be greatest at the maturity stage and then becomes relatively insensitive again in the declining phase of the market. There is very little empirical evidence put forward to support this hypothesis and it may be that the environmental circumstances which the author has in mind are rather different from those obtaining in the U.K. However, there is no doubt that changes do normally take place in the life cycle of a product; there is a change in the competitive situation as other firms enter the market

for a new product; there is an increase in the consumer's awareness of the product and possible substitutes; and there is often a change in the needs of the consumer. A knowlege of these changes and some approximate idea of when they may occur, would be of considerable help to the marketing manager who should be planning his marketing effort to cover the whole of a product's life cycle. This could involve a change of policy, particularly price policy, to suit the different stages and conditions involved.

Pricing policies and pricing decisions

The problem of pricing is obviously not a new one. It has existed, in principle, since man first began to barter one article for another but its manifestation in monetary terms awaited the arrival of an acceptable medium of exchange. For most of this time the basic negotiating situation has been obscured by the constraints imposed upon society by secular or religious authorities. These constraints were designed to preserve the established order in society and, Heilbroner[61] believes, are related to the interdependent nature of early social groupings and the basic need for survival. This emphasis upon order in society meant that the idea of gain, that each man should strive to improve his position in society, "was quite foreign to the great lower middle strata of Egyptian, Greek, Roman and Mediaeval cultures".[62] Even during Shakespeare's time people were very much concerned with maintaining the established order in society, an order which, it was felt, reflected in microcosm the divine order in the universe.

The constraints imposed upon society, whether in the form of tradition or by reference to a deterrent, included both prices and incomes and were, if we are to believe the historians, rather more effective than the present Prices and Incomes Board. Here then, is evidence of pricing policy laid down by the 'authorities' as a guideline for decision making at the individual level. Naturally the nature of these policies and the vigour with which they were enforced has varied considerably fromperiod to period.

Concern with ethical principles persisted throughout the earlier Middle Ages and was reinforced by St. Thomas Aquinas and the other Scolastics. These principles were subsequently embodied in the ordinances of the Gild Merchant[63] and later the Craft Gilds[64]. There were occasions, however, when the State intervened to control prices for economic rather than ethical principles as in the Ordinances of Labourers 1349[65].

In the earlier Middle Ages the idea of a conventional price was not an unrealistic one; the natural state of the economy, and difficulty of transport and hence the local nature of the market, and the restrictions on trading imposed by the religious and secular authorities provided extremely effective deterrents to the would be exploiter. Nevertheless the identification of forestalling, regrating, and engrossing[66] as illegal activities suggests that such activities were not unknown.

By the 15th century the concept of the just price was becoming a little tarnished partly through the need to incorporate transportation costs, through miscalculations, and through the

fluctuations in supply and demand. This charge was also due to a growing interest in bullion and a concern to accumulate treasure and gold. The Mercantilists of the early 17th century accelerated this movement away from the 'ethical' price by emphasising the need to make the country rich through profitable sales. Thus, they argued, it was in the interest of the country for the seller to sell more dearly than he bought. Later, Sir William Petty (1623-87), the founder of political economy, drew the distinction between a 'natural' price and a 'political' price[67]. The political price was an adjusted price reflecting the influence of the merchant, of customs, and of fashion. The concept of the just price was undermined by the Enclosure Movement and the Commutation of Services and finally disappeared towards the end of the eighteenth century. It was replaced by the classical economists' doctrine of Laissez-faire. In contemporary society the Prices and Incomes Board has resurrected the guidelines within which price decisions should be taken, but this time on an economic basis "to ensure that British Industry is dynamic and that its prices are competitive".[68]

At the micro-economic level within an individual company, the objectives may be rather different from those indicated above but the principle is very similar. A policy statement concerning price may help the executive concerned achieve greater consistency in his decision making, or it may provide useful guidelines for subordinates when pricing decisions need to be delegated.

A policy statement should provide executives with opportunities to use their initiative and discretion but it should also indicate the boundaries beyond which they should not transgress. These contraints are intended to apply under normal conditions and, when adhered to, assist in the effective administration of a business. Unfortunately conditions are not always normal and there may be occasions when it is necessary or advantageous to deviate from the established policy. When the policy and decision making rests with the one individual such deviations from policy are easily accomplished. When policy is formulated at one level in the hierarchy and the decision making takes place at another level there may be some difficulty achieving the same flexibility. The further away in the organisational structure the decision taker is from the policy maker, the more reluctant will he be to raise the question of a special decision because of the possible reflection on his professional competence. Thus unless there is a rapid and effective communication system between the individuals concerned, designed specifically to deal with abnormal situations, some opportunities may be missed. There is also the possibility as in example S_1, that the descretion permitte a subordinate in making pricing decisions is used in a manner which conflicts with the company's

main objectives. The subordinate may be mainly concerned with the problem of maintaining the inflow of orders and may thus tend to quote lower prices than is necessary or desirable.

Chapter 6.

Pricing Policy

In practice there appear to be three main types of pricing policy which are concerned with the general level of prices and a number of others which concern the relationship between prices within one organisation (including transfer pricing), the form in which prices should be quoted, and the technique of calculation.

Customer oriented price policy

The first of the main types of policy concerned with the establishment of a general price level is the customer oriented policy or 'charging what the market will bear'.

This type of pricing policy implies some discrimination by the seller between product, market, and customer and presumes that he has some knowledge of the customer which is perceived to be adequate as a basis for the discrete decision making involved. The price decision taken may be implemented through a direct quotation to the customer in response to an enquiry, as an invoiced figure where no formal quotation has been required, or during a 'negotiation' with the customer. This kind of orientation is also possible in the assessment of the quantity and quality of the product/service offered when the price is set by the customer.

Such discrete decision making by the chief executive is possible when the number of decisions to be taken is relatively small. When the number of events is large the decision making, and the discretion to adjust, has to be delegated to a subordinate if this particular policy is to be implemented. This is a difficult step for the chief executive to take and it is usually undertaken in stages. The first stage may be to delegate the smaller items, which are often more numerous, and to allow discretion only within certain limits. If this step is successful the process might continue with larger items and slightly more discretion. Where there is a very large number of items involved which have to be sold individually it is usually uneconomic to operate in this way and formal price lists are prepared.

As a special case, this category includes conditions of pure and perfect competition where the price is normally determined by the market and knowledge of this price is readily available.

Out of the 29 small firms visited, 21 (72%) were found to have a price policy in this category, and every firm provided evidence of having operated on this basis at some time. The answers to the postal questionnaire showed that approximately 50% of the respondents also used this type of price policy.

Competitor oriented price policy

The second type of policy concerned with the general level of pricing is the competitor oriented policy. The main focus of attention here is upon meeting competitors' prices, a policy which may have arisen because of imperfect knowledge of the market, fear of competitors, or just laziness is not wishing to make the effort to collect the appropriate information to take alternative action. This is the sort of price policy normally adopted in the later stages of a product's life cycle when the number of competitors is significant. It may be implemented by following a recognised 'price leader', as with some companies in the display industry, or in a rather more sophisticated way of using a similar approach to that outlined by Franz Edelman[69] in the Harvard Business Review and described later in this thesis.

Three of the display firms visited showed that their pricing policy was to be competitive and this was carried out by comparing both the prices and the costing system used with the perceived price leader in that industry. Two of the pressmetal working companies also used this type of policy for those items which were sold through a price catalogue in a very competitive market. A much higher proportion, 40% of the respondents to the postal questionnaire put themselves into this pricing category but those subsequently visited and interviewed also admitted charging what they thought the market would stand in certain circumstances.

Cost oriented price policy

This is the third main type of policy concerned with the general level of prices and is sometimes referred to as 'target pricing', or as the 'cost plus' or 'mark up' policy. It has as its objective a particular profit margin representing a return on capital and on turnover which is reflected in the percentage added to total cost. This 'absorption costing' calculation normally includes a proportion of overhead costs allocated in whatever manner is considered appropriate. Many overhead costs, and other elements in the total cost complex, are extremely difficult to attribute in any accurate way and thus the technique itself has become the subject of much controversy among both accountants and economists.

Implicit in the use of a cost plus pricing policy is the assumption that the market will stand the price calculated in that way. While this may be true some of the time, a drop in the demand for a particular company's product should, therefore, result in a reallocation of overheads and an increase in the price of the product quoted thereafter. A computer programmed to recoup overheads on a cumulative time basis through a cost plus pricing calculation would do this automatically, possibly with quite disastrous consequences.

Not all cost based pricing is related to total cost. Economists have long been prescribing marginal costing as one of the bases for price determination and nowadays management accounts are also advocating the use of marginal costing for this purpose although the component factors are somewhat different. A comparative analysis of the marginal (or incremental) costs incurred by various products provides an excellent basis upon which to decide the combination of products and quantities which would be most successful in achieving the company's profit objective, or minimising the possible loss in a falling market.

Three of the display firms gave their price policy as a specific margin on cost, and in each case the reference was to total cost, inclusive of overheads. Two of the pressmetal working firms also gave this category as their price policy but related the mark up to marginal cost in the accounting sense so that the mark-up was also the 'contribution'.

Only 10% of the respondents to the postal questionnaire gave this as their pricing policy.

One of the difficulties involved in identifying the particular kind of pricing policy used by observational means is the fact that it is quite possible for one specific price to meet the requirements of all three policies at one and the same time. There is the further difficulty that all firms develop some kind of costing system to provide them with a guide to the price level below which it is uneconomic to operate. This, plus an 'acceptable' profit margin is often paraded as the company's formal price policy though in fact, as the survey has revealed, it is observed more in the breach than in the application.

It was remarkable that no firm had specified profit maximisation as its current objective and yet 72% had adopted a pricing policy which directly implied this. The adoption of this type of pricing policy by such a high proportion of companies and the additional evidence of others 'indulging' in this kind of behaviour, supported by a number of statements referring to the target profit as a minimum level, suggests that the more realistic objective for most of these companies was indeed profit maximisation, albeit in an enlightened way.

The relationship between prices

In addition to policy decisions about the general level of prices many firms are concerned about the relationships which exist, and which may be seen to exist, between items in the same product line and also between the various product lines. The definition of a product line offered by Harper[70] includes "the product in several different sizes, colours, structural strengths, flavours, or with different horsepower or accessories . . . . " Wasson[71] broadens this definition to include

"complementary and supplementary items which the seller groups into an assortment ..." and, "a group of nearly-exclusive buyer choices to serve a group of closely related market segments."

Taking Harper's definition first, it is possible to develop a costing system which would attempt to identify the intrinsic differential in value between products in the product line[72]. Whether or not this differential is made apparent in the pricing structure would depend upon the general level of price policy adopted. A cost-plus approach would obviously illustrate the quality differential involved whereas this may not be true of the customer oriented, and competitor oriented policies. This quality/price relationship is of some importance where the customer is able to perceive a qualitative difference between products in the same 'line'.

Wasson's inclusion of 'complementary and supplementary items' makes a qualitative evaluation by the consumer more difficult – and his second definition, which includes 'special' items, makes such an evaluation extremely subjective. This does not mean that the seller may ignore the cost variations involved, indeed most firms go to considerable lengths to identify these differences, but there is less emphasis upon the correlation between cost and price. The conditions obtaining in the display producing and screen printing industry are very similar to those included by Wasson in the second category and here also there appears to be little evidence of a concerted attempt to correlate cost with price in any identifiable way. In the pressmetal working firms, since most products are made to customer specification, the only obvious quality differential would arise through the use of a more expensive basic material, e.g. nickel instead of stainless steel, or brass instead of steel.

Table 1 in case E_6 illustrates how a company will alter the cost relationships to present the customer with a 'logical' pattern of prices. The extract which follows shows that the cost of purchasing Size 2, which is the larger size, is less than that of Size 1, and yet the lowest selling price offered in the catalogue, i.e. list price - 25% (discount for quantity) is the same for both items.

Extract from Table 1 Case E_6
Factored items in shillings per '00 feet

Flexible metallic tubing	Bought out cost	Lowest selling price List -25%
Size 1	20.58	30.62
2	16.66	30.62
3	21.33	31.12

The remaining items all conform with the expected pattern, i.e. an increase in cost and price accompanying an increase in size.

The price lists issued by E_{11}, S_1, and S_2, all exhibit the same 'expected' pattern of relationships although the profit margins, as in E_ϵ, do vary considerably. This expectation by customers of a price/quality/size relationship permits, and indeed encourages, product and process innovation, as illustrated in Case S_1, and E_8, where a change in the process and product respectively resulted in a substantial reduction in cost which was not immediately passed on to the customer.

Transfer pricing, the prices charged for goods sold to a subordinate or associated company, may be included as a special case under this heading. In the display industry there were five companies where inter company trading could have taken place but, in fact, only one, D_{14}, was actively involved. In this instance the pricing policy was to sell (or purchase, as the case may be) at current market prices. Thus both firms operated independently and were completely autonomous. In the pressmetal working industry E_4 was the only firm regularly involved in inter-company trading and here also the current market price was used. The general impression gained from both D_{14} and E_4 was that each company had to 'stand on its own feet'. How long this attitude would have persisted in the face of a decline in the sales of either company is a matter for conjecture.

There is one further item which is of relevance in this context. The General Manager of D_6 explained that although for most of the work he was able to determine prices independently he was 'required' to conform with the parent organisation's price for orders from certain customers passed on to him from the head office. These prices were normally lower than he would have charged.

The form in which prices are issued

Apart from policies concerning the general level of prices and the relationship between prices most companies also establish guidelines indicating the manner in which prices should be quoted.

There are many ways in which this may be done but the main categories are given below.

Flat rate pricing; where a specific, and fixed, charge per unit is made.

Two part tariff; when a fixed charge is accompanied by a cost per unit consumed, or cost per ton-mile as in the Basing Point System[73].

Block tariff; this applies equally to the sale of gas in this country and to the discount structure offered by many companies for bulk purchase.

Lease, credit, or outright purchase; which provides a differential time basis over which payment may be made.

Special terms involving delivery; such as c.i.f., f.a.s., f.o.b., f.o.r., ex mill, delivered, etc.

Most firms use combinations of these various categories but even so there are a great many variations within each category. For example, one American Marketing Director one remarke that he had found 222 ways of getting around a fixed list price for steel.

Prices quoted by firms in the display industry were usually quite straightforward and involved one or more of the following;

(a) a total order price;

(b) a discount for particular customers;

(c) a delivery charge.

In the pressmetal firms this was frequently diversified further by the inclusion of a charge for

(d) tooling.

In the latter industry the total order price was sometimes quoted on the basis of price per unit, i.e. per thousand, per gross, per hundred, per dozen, per ton or each; for convenience.

Pricing policies thus indicate the guidelines within which specific pricing decisions should be taken and indicate the tolerance within which the executive responsible is able to use his discretion. Implementation of the policy is normally through a pricing technique which involves some system of costing and which appears to differ from firm to firm.

Chapter 7.

Pricing techniques

Over the years economists have developed a simple, yet elegant mathematical model of how a firm should determine its price for a particular product[74]. This model assumes that the firm seeks to maximise profit and is able to identify both the cost and demand functions for the product concerned. From these two functions it is then possible to derive a revenue and a profit function and, by use of the differential calculus, determine the point of maximum revenue and/or maximum profit.

Unfortunately there are some quite considerable statistical difficulties hindering the determination of precise cost data in retrospect and even greater problems involved in predicting such data. Demand functions are even more difficult to determine because many of the variables involved are so inter-related and, in some cases, not quantifiable.

The cost function.

The majority of business organisations take the first step toward the determination of a cost function by the establishment of a more, or less, complex costing system but very few proceed beyond this to construct an effective econometric type formula. This was true of firms in both the display industry and the press metal working industry. In the display industry the differing degrees of complexity in the costing system are shown in the following examples.

Display Companies – cost calculations

Company D_2

	£	s	d
Labour	20	0	0
+ 200% overheads	40	0	0
	60	0	0
+ 12½% profit	7	10	0
	67	10	0
Materials	33	10	0
+ 12½% waste)	8	7	6
+ 12½% profit)			
	109	7	6
Subcontracted work	14	0	0
+ 12½%	1	15	0
Price	£125	2	6

Company D_7

	£	s	d
Labour (hours + 25%) x	25	0	0
rate + 50% for holidays etc	12	10	0
Total labour cost	37	10	0
+ 20% overheads	7	10	0
Material costs	5	10	0
+ 10% expenses		11	0
Total cost	51	1	0
+ 25% profit	12	15	3
Price	£63	16	3

Company D_6

	£	s	d
Labour costs	2	10	0
+ 200% overheads	5	0	0
Material costs	1	7	6
+ 50% (expenses)		13	9
Subcontracted cost	1	0	0
+ 10% (expenses)		2	0
Total manufacturing cost	10	13	3
+ 1/9 selling cost	1	3	9
Total cost	11	17	0
+ 10% profit	1	3	8
Price	£13	0	8
+ 1/9 (Additional for Advertising Agencies)	1	9	0
Invoice Price	14	9	8
Less discount 10%	1	9	0
Net Price	£13	0	8

Company D_3

	£	s	d
Labour cost			
+ % for overheads			
Material cost			
+ 15% handling expenses			
Prelim. Total cost			
+ 10% margin for error			
Final Total Cost			
+ 18½% for discount to Adv. Agencies			
Selling Price			
– 15% discount			
Net Selling Price			

N.B. Figures were not available

Company D_{13}

1. Direct materials .....
2. Direct labour .....
3. Overheads (allocated on a machine hour basis) .....
4. Manufacturing cost .....
5. + 10% for scrap .....
6. + 10% for contingency _____
7. Total Works Cost _____
8. + 4½% Administration Cost .....
9. + 3½% Selling Cost .....
10. + 2% Distribution Cost _____
11. Total Factory Cost (EACH) _____
12. Trade Discount .....
13. Net Profit/Loss (normally + 10%) _____
14. Selling Price (EACH) _____

N.B. Figures were not available.

Company D_9

Labour Costs	3	10	0	
Overheads				
Direct expenses + 100%	3	10	0	
Indirect expenses + 60%	2	2	0	
Material costs	2	10	0	
+ 10% expenses		5	0	
+ weight @ xd per lb.		7	6	
Outwork costs		–		
+ 10% expenses		–		
Carriage		–		
Cost of standing type (1d per sq.in. per annum)		–		
Order charge	1	0	0	
Total Cost	13	4	6	
Profit margin:- range + 3% to + 5%	£13	12	6 to £19	16 9
+ Purchase Tax				
Invoiced Price				

N.B. The cost of labour *and* overheads in this calculation was based upon a budget of costs for the current year drawn up in the previous year.

In Companies D_2, D_3, D_4, and D_5 the overhead allocation was based on the previous year's expenditure but in all other companies the overhead cost was a predicted cost incorporated into the current budget.

The differing types of costing systems used by firms in the press metal working industry are shown below. Overhead allocation and the profit margin required in eleven out of the twelve metal working companies was based upon a forward budget incorporating anticipated costs. The one exception to this was E_1 where the chief executive responsible for costing and pricing professed not to know even the previous year's overhead costs.

Pressmetal working companies – cost calculation.

Company E_1

The following example of the costing and pricing process for a watering can rose is calculated on the basis of 1,000 units.

			Shillings	
3¾" rose	Front piece			
	Materials:	68 lbs @ 6/3	425	
	Labour:	cutting	15	
		piercing	15	
		raising	15	
		polishing	46	
			516	516
	Back piece			
	Materials:	108 lbs @ 8¼d	77	
	Labour:	cutting	15	
		raising	15	
		piercing	12	
		fitting socket	18	
		rivetting socket	12	
			149	149
	Socket			
	Materials		240	
	Labour:	forming	18	
		tapping	20	
			278	278
	Screw collar			
	Materials		140	
	Labour:	cutting	21	
			161	161
	Washer			
	Materials		88	
	Labour:	cutting	5	
			93	93
Assemble screw and washer			20	
Rose assembly and packing			20	
			40	40
				1237

This information was then used in the following way to calculate price.

Materials – total cost	970 shilling per '000
Labour	267 " " "
Overheads + 25% of lab. cost	67 " " "
"On - cost"	256 (roughly 100% on labour cost)
Price quoted	1550 shillings per '000

In this particular case the total scrap reclaim value was estimated at 137/- per '000 but this amount was not deducted from the total material cost included in the calculation.

Company E_2 1)

Old method

shillings per gross

Labour cost + 350% for overheads	80	0
Material cost	60	0
+ 25% handling cost	15	0
	155	0
Price	1/1d each	
+ tools	4¼d each	
	1/5¼d each	

New method

shillings per gross

Labour cost (incl. overhead cost)	95	0
Material cost	60	0
+ 12½% handling cost	7	6
	162	6
Price	1/1½d each	
+ tools	4¼d each	
say	1/6d each	

Company E_2 2)

Old method

shillings per gross

Labour cost + 350% for overheads	80	0
Material cost	60	0
+ 25% handling cost	15	0
	155	0
Price	1/1d each	
+ tools	4¼ each	
	1/5¼d each	

New method

shillings per gross

Labour cost (incl. overhead cost)	95	0
Material cost	60	0
+12½% handling cost	7	6
	162	6
Price	1/1½d each	
+ tools	4¼d each	
say	1/6d each	

Company E_3

Job B. Order quantity 1,500 units

	s	d	
Materials	355	0	per gross
Labour	18	6	" "
Overheads + 300% (on labour)	55	6	" "
	429	0	" "
Carriage and Agent's commission	14	0	" "
	443	0	" "
Profit + 25%	110	9	
Price quoted	553	9	per gross

Company E_4

Order	A			B			C			D			E			F		
Estimated cost per gross	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d
Tool costs		10	6		10	6		13	3		8	0		6	0		8	3
Setting costs		3	8		14	9		5	10		2	1		5	2		2	2
Material costs (less reclaim)	6	17	7	3	9	10	7	18	4	3	8	5	3	13	4	6	10	10
Labour	1	12	11	2	9	2	3	1	5	1	4	9	1	3	9	6	0	7
Standard Selling Price	9	4	8	7	4	3	11	18	10	5	3	3	5	8	3	13	1	10
Actual Selling Price	8	19	0	5	12	4	11	12	4	6	2	4	5	9	2	14	0	7

N.B. The overhead allocation, profit margin and direct labour cost included in the labour rate per hour were those calculated when the formula was first devised in 1968.

Company E_6

This company's costing and price procedure for 'special' items was illustrated in the following example.

Product 59509 ES. Box 5/ST 5.1/16"

Material costs in shillings per '00

½ Box shell	49.260
Sliding steel lug	6.000
Enamel rack	25.000
Screw	0.821
	81.081

Labour costs in pence per '00

Raise	13.00
Weld	36.00
Pierce 1	21.50
Pierce 2	12.00
Assemble	48.00
Pierce 3	8.50
Plunge	8.50
Tap	8.50
Assemble	24.00
Tape	12.00
Shear	12.00
Tap	15.00
Tape	30.00
	250.00

or 20.833/- per '00.

	Shilling per '00
Materials	81.081
Labour	20.833
+ 400% overheads	83.332
Factory cost	185.246
Commercial on-cost (+ 31½%)	58.354
Total Cost	243.600
=	24/4d per 10
Profit margin + 10	2/5d
Selling price	26/9d per 10

Company E_{11}

The following two cost/price calculations illustrate both the old and the new method of approach.

Product A

New system

Bought out	281/1¾d	per	'000
Roll feed 6/3d + 520%	38/9	,,	,,
Hand press 39/2¼ + 145%	96/-	,,	,,
Cleaning 4/9d + 100%	9/6	,,	,,
Packing 8/0¼ + 100%	16/0½	,,	,,
	441/5¼	,,	,,
+18¼% (admin. & sales)	80/6¾	,,	,,
	522/-	per	'000

Old system

Bought out	281/1¾%	per	'000
+ 20%	56/2¾	,,	,,
Labour cost + 40%	58/2½	,,	,,
	232/10	,,	,,
	628/5	per	'000

Price quoted 628/4¼ per '000

Product B

New system

Bought out	1031/10½	per	'000
Roll feed 22/- + 520%	136/5	,,	,,
Packing 43/11 + 100%	87/10	,,	,,
	1256/1½	,,	,,
+ 18¼%	234/8½	,,	,,
	1490/10	,,	,,

Old system

Bought out	1031/10½	per	'000
+ 20%	206/4½	,,	,,
Labour cost + 40%	65/11	,,	,,
	197/9	,,	,,
	1501/11	per	'000

Price quoted 1501/11d per '000

It is obvious from the costing procedures used in both industries that, excluding catalogue items, each order is costed individually. The actual costing arithmetic may have involved quantities which represented batch size or other convenient groupings, but the calculation is essentially concerned with the total quantity for that particular item. It is clear also that the costing process identifies labour and material costs individually in all companies except the four display companies mentioned above and El. It does also identify overhead costs in detail and the profit margin incorporated into the budget. It is possible, therefore, for the chief executive of each company to calculate the direct costs involved and, by simple division, to arrive at the equivalent of the 'average' economic marginal cost; in fact this is normally referred to by management accountants as the marginal cost of a product[75].

It is important to notice at this point that the kind of enquiries which are costed on a discrete basis are those which require time for planning and preparation. In the press metal industry orders of this kind do normally require special tools, and often special materials, which have to be made or purchased, a process which involves some time delay. It is unlikely therefore that the receipt of an order will have an immediate effect upon the company's production activity.

This means that theoretically the time delay involved may be sufficient for the company concerned to regard both the material and direct labour costs involved as escapable costs, and thus marginal costs in the economic sense.

The demand function.

The demand function for tha particular product, or service, is even more difficult for a firm to determine than its cost function. This is because of the large number of variables involved affecting potential demand and the firm's share of the market. There is a further analytical problem which arises because of the multicollinearity of variables within each of these groups and also because there is a "two way causation"[76] effect between the groups. This has meant that the single demand equation, however complex[77]*, has proved inadequate to explain and predict demand with the result that some economists have been experimenting with the use of systems of simultaneous equations, so far with limited success.

This type of approach calls for a volume of data and a level of mathematical sophistication unlikely to be found in the small firm. The evidence obtained from the small firms visited revealed and overwhelming tendency to treat each enquiry as a discrete event; there was very little evidence of any explicit formulation of

(a) the product life cycle,

(b) the current market position, or

(c) their own demand situation.

There were occasional comments which could be interpreted as an implicit awareness of these functions as, for example, the statement made by the Managing Director of D_2 concerning the increasing amount of competition from new firms in the display industry. However the general impression gained was that very little attention was paid to the long term trend in the market for a particular product and the current market position was determined "intuitively" through contact with customers and competitors in the normal process of business.

The process of order evaluation used by the small companies visited appeared to be very subjective but may be illustrated diagrammatically as follows, and represents an intuitive, if crude, version of the Bayesian[78] decision model.

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* One example of a complex forecasting equation for total refrigerator sales in the United States was provided by B. Slaten of the Econometric Institute (U.S.A.) in 1958 and described by Milton H. Spencer, Colin G. Clark, and Peter W. Hognet in "Business and Economic Forecasting" p.p. 252-279, Irwin 1961. The equation was given as follows

$$S = R + y\left\{H_W\left[.0045 + .011\left(\frac{I + 3C/P}{10^{.0217T+1.035}}\right)\right] - .000016y\right\}$$

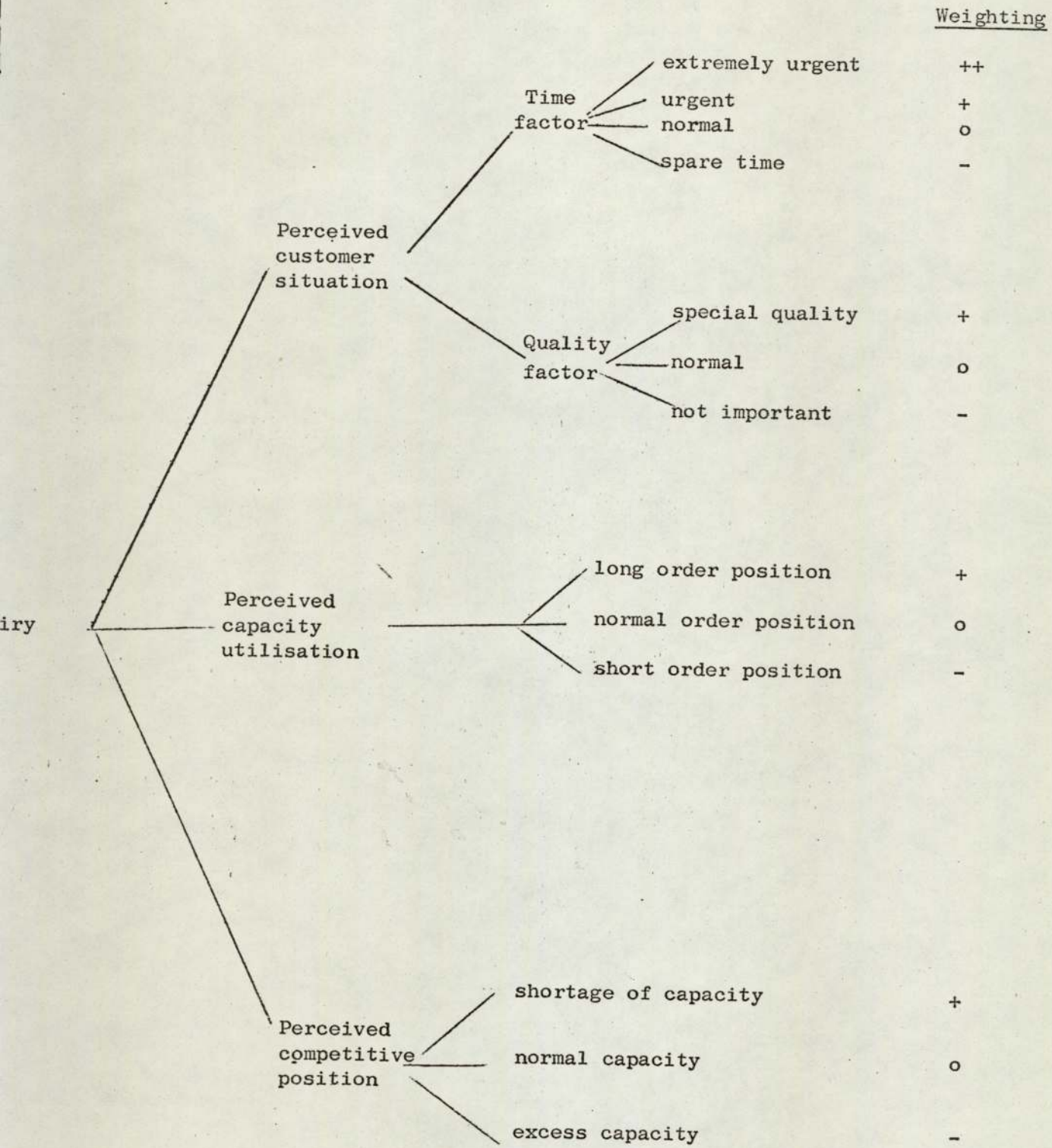
Where

S = total new sales in thousands of units
R = computed replacement sales based on estimated wastage.
y = stock of refrigerators
H_W = wired homes
I = supernumary income
C = consumer credit
P = price index of household furnishings
T = trend factor

Figure 9

Discrete enquiry evaluation process

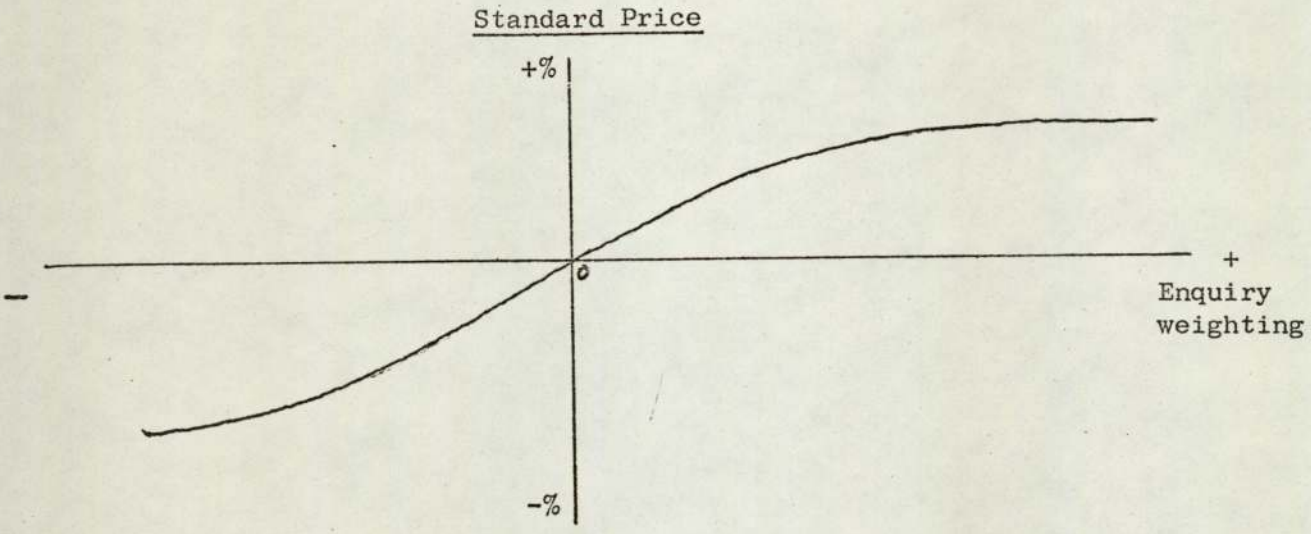
Stage 1.



Stage 2.

A summation of the weighting is then related to the 'standard price' calculated by the firm in what appears to be the following way.

Figure 10

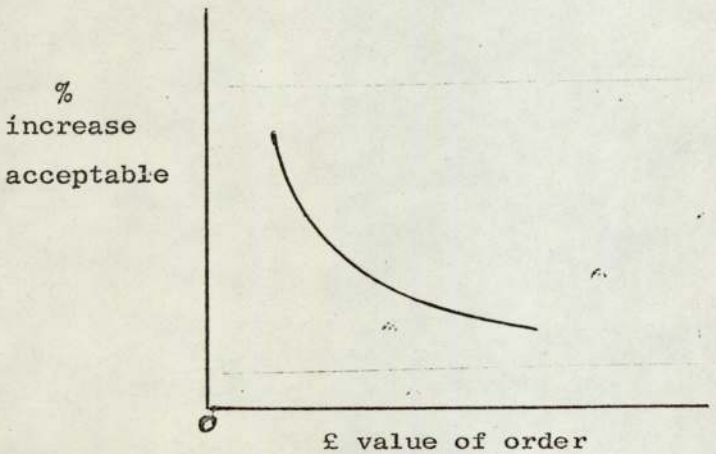


The deviation from the standard price varies for each company as the evidence from the investigation reveals but the upper asymptote sets the limit of 'enlightened' exploitation and the lower asymptote the perceived marginal order cost involved.

Stage 3.

There was one further consideration which the small company proprietor seemed to bear in mind when establishing the upper price limit. This was the total money value of the order involved. It was felt that the percentage increase acceptable to the customer depended a great deal upon the total monetary value of the order. Thus a very small order might have a very high percentage mark up whereas a very large order may only have a small additional percentage increase. Diagrammatically this may be represented as follows.

Figure 11



Stage 2 of the model shown above is similar in some respects to that constructed by Franz Edelman[7] to show the probability of success at different bid differentials. Edelman points out that in this context "information traditionally collected and processed by the accounting system is not geared to be of assistance, and recourse must be had to other sources – namely, managerial judgement". The article does not, however, go on to analyse in any great detail the factors upon which this judgement is based, and unfortunately there is insufficient information available from the small companies visited to develop this line of enquiry, though obviously there is a great deal of scope here for further research.

Small firms operating in a fairly limited geographical market who do not have sufficiently precise data or mathematical sophistication to use the complex methods mentioned above could still benefit from a systematic approach to the determination of factors affecting demand.One possible approach would be to start with a very simple arithmetic type formula to determine market share and, through a process of continuous appraisal and refinement, eventually derive a useful working model of the market, e.g.

The basic demand function for any product may be represented in the following way.

Sales = (potential, effort, competition).

Potential demand is an arithmetic figure normally determined by reference to such factors as population, income, occupation, geographical distribution, tastes, habits, and time. Where it is not possible to construct an econometric type formula embracing all the significant elements it is often possible to use a simple projection (often published by a research institute or trade association) of standard indices. For the display firms an extrapolation of the display expenditure figures shown in Figure 4, Chapter 3 above could form the basis for such an index; and for the press metal working forms a projection of the Index of Industrial Production might be useful.

The 'effort' factors, which includes all the possible elements of the marketing mix, for both the i'th company and its competitors could be included in a simple formula to provide a firm with its theoretical share of the market. The formula might be as follows.

$$\text{Share of market for the i'th company} = \left[\left(\frac{P}{Pi} + \frac{Ai}{A} + \frac{Si}{S} + \frac{Qi}{Q} + \frac{D}{Di} + \ldots \right) \div x \right] \div \text{'n'}$$

Where i) x represents the number of variables in the marketing mix; and

ii) 'n' represents the number of significant competitors.

N.B. Under this latter item a number of small competitors could be grouped together and taken as one significant competitors for the purpose of this calculation.

iii) P represents the average market price;

iv) A represents the average amount spent on advertising;

v) S represents the average number of salesmen;

vi) Q represents the average quality factor;

vii) D represents the average delivery delay.

viii) Letters with the subscript i represent company i's comparable state.

The expression shown above could contain as many, or as few, variables as the company considers significant, but could be altered during the sequential refinement process. It was not possible to experiment with this formula during the time taken to obtain information for this thesis but such an approach has been used with manual and computer Business Management Exercises at the University of Aston with some success.

The obvious weakness in this and other models which seek to establish a demand function is the lack of information available about consumer response to the marketing variables used including, of course, price.

Pricing research

The lack of adequate knowledge about the consumers' reaction to the general price level for a particular product and to the relationship between prices for products in the same group has been a source of concern for many years. Businessmen themselves have been most reluctant to experiment with prices but some pricing research has been going on, mainly in the consumer goods field, since well before the Second World War. Eli Ginsberg, for example, reported in the American Economic Review[80] of 1936 an experiment with mail order catalogues to measure the price sensitivity for one product. The evidence was conflicting and involved a rather substantial loss on one item which rather dampened the marketing manager's ardour and the experiment was discontinued.

In 1950 William Applebaum and Richard F. Spears[81] outlined a methodology they had developed over the previous ten years for controlled experiments in marketing research in conjunction with a number of leading American manufacturers of food and grocery products. These studies were designed to determine the behaviour and response of people to products, methods of display, and selling devices at the point of purchase. The experiments proved interesting but expensive to conduct and the conclusion was "that there is ample room in marketing research for less scientific – but more expeditious and less expensive – methods than controlled experimentation".

One solution to the expense problem involved in the conduct of controlled experimen in marketing research was suggested by Edgar A. Pessemier[82] in 1959. This solution involved th construction of a simulated situation in which respondents were asked to simulate their shopping behaviour for various items of nondurable goods. In the initial experiments respondents were required to make repeated "shopping visits" to enable the researcher to assess the influence of price on brand loyalty. Later experiments involved a number of samples of respondents each making only one shopping visit. This techique was taken one stage further[83] by constructing matched samples of respondents who were then exposed to various advertisements for a particular consumer durable which they were to assume they would be purchasing in the near future. The results of this latter simulation threw serious doubt upon the traditional technique of gradual price reduction over a long period of time by highlighting the vulnerability of brand loyalty to a signigicant drop in price.

Most of the literature concerning pricing research seems to have originated in the United States but recently there has been some evidence of research work of this nature in Europe. Andre Gabor and Professor Clive Granger[84] at Nottingham have conducted experiments to expose consumers' price-willingness in a number of markets. This research was based upon an original idea conveived by Professor J. Stoetzel[85] of the Sorbonne who suggested that the consumer associates a range of prices with any given product and not just one price. Gabor and Granger used both the direct and indirect research technique to explore this relationship and found that the results obtained by one method were "substantially similar" to those found by the alternative process. The results indicate that it is possible to determine the most acceptable price range for a new product which is being introduced into a market which already has a well established stable price structure. The authors do, however, suggest that the two methods used might not show such close agreement for other, more expensive and less frequently purchased, goods.

Simulation techniques have also been used in the U.K. to determine price sensitivity from consumers' attitudes towards theoretical price changes. One such experiment is described by Marshall and Edghill in the Financial Times Feb. 1st 1968. In this particular case the technique was used in the confectionery field to obtain information which could be used to predict the likely effects of specific price changes. The prediction made from the attitude survey results closely matched the drop in despatches experienced after the price change had taken place. There was some discrepency between both of these figures and that obtained from a retail shop audit but the main

conclusion drawn was that "it is possible to obtain a good guide to likely demand, for a given change in price, using the consumer attitude survey".

These and many other recent experiments have provided extremely useful insights into the relationship between price and demand and into the psychological aspects of consumer pricing decisions; unfortunately, they have been concerned mainly with consumer type goods and there is very little information available about similar experiments in the industrial goods field. The researc into pricing which has occurred inthe industrial field has been concerned with the process of pricing by the seller and not with the problem of measuring and explaining customer reaction. The surveys quoted above by Hague, Fog, Haynes, Kaplan, Dislam and Lazillotti, etc., and the 'experiment' carried out by G. L. S. Shackle[86] all fall into this latter category and only incidentially offer occasional comments about purchasing behaviour, as indeed does this present survey. The conduct of controlled experiments in the industrial field is obviously extremely difficult but, nevertheless, necessary if seliers are to become more effective in their pricing policy and pricing decisions. There is one other source of information open to those interested in industrial consumers' behaviour. This is, of course, the research which has been carried out concerning purchasing behaviour but as a basis for improving buying decision making rather than marketing. The evidence provided by E. H. Bowman[97] reveals a discrepancy between the theoretical and practical decision making process, which is of interest to the seller, but does not identify the particular factors involved nor the significance attached to such factors by the buyer.

Discrepancies between price policy and pricing decisions

Customer oriented price policy

Nearly three quarters of the small firms visited declared that their price policy was to charge what the market would bear. In the majority of these companies the chief executive was responsible for both formulating and implementing price policy and the evidence available seemed to indicate that, to the best of his knowledge and ability, this was how prices were determined. However, when the two functions were separated there was some evidence of a significant difference in the way in which the policy was implemented, and also of a deviation from the policy itself.

S_1 was a company in which both of these deviations occurred. At the time of the visit there were three people involved in pricing; the Chairman on rare occasions, the Managing Director for approximately 50% of the orders, and the Production Manager for the remainder. It was the Chairman who had been responsible for establishing this particular pricing policy when he was Managing Director some years previously.

This company, like many of the others, had devised a formula for calculating a 'standard' price which included the normal profit margin of $33^1/_3\%$ on total cost. This was intended for use only as a guide and the actual price quoted, or invoiced, was to be determined in the light of the circumstances surrounding each order.

The evidence provided in Table 1 shows that both the Managing Director and the Production Manager deviated from the formula price for the great majority of items quoted. There were only four cases where the net revenue obtained was equivelant to the formula price, and each of these was priced by the Production Manager. There was, however, a significant difference in the deviations from the formula price between those calculated by the Managing Director and those determined by the Production Manager. In the former case the deviations from the formula price averaged + 1.7% and represented an annual equivalent of £1,020 on a turnover of £60,000; in the latter case the deviations averaged −3.7% and represented an annual equivalent of £2,220. A small part of the negative deviation arising from the prices determined by the Production Manager may be attributed to a misunderstanding over the rate per hour to be charged for labour in the formula, assuming that a change in the formula would have produced a similar change in the final price. But even if this arithmetical error was corrected it would still have left a significant difference between the two sets of prices which could have amounted to approximately

£1,600 in a full year, roughly one third of the average profit received in recent years. It was obvious also that the range of deviations resulting from the prices established by the Managing Director was greater than those arising from the Production Manager's prices, i.e. + 93% to −40 compared with +83% to −20%.

In order to investigate this phenomenon further, a little while after the original enqui took place the three people involved in pricing decisions were asked to price the same 20 orders. The results of this experiment are given in Table 2. This time the Production Manager's prices were found to be strictly in accordance with the pricing formula but were, in fact, those invoiced to the customers. Thus while the firm professed to have a customer oriented price policy the Production Manager was implementing a standard 'cost plus' technique. On this occasion the average deviations from the formula price resulting from the Chairman's calculations were +3%, and from the Managing Director's +26%. In terms of the annual equivalent sales revenue this represented an increase of approximately £1,800 and £16,000 respectively. It was interesting also that the range of deviations arising from the Chairman's prices was +33⅓% to −45% on the formula price and that from the Managing Director's prices +10% to −13%. In the Chairman's case there were four items above the formula price and fifteen below it whilst in the Managing Director's case there were fourteen above and only five below the formula price.

E_9 was another company where the evidence highlighted a significant difference in the implementation of the pricing policy by people at different levels in the management hierarchy although, in this case, there was no deviation from policy.

The company's price policy was to charge what the market would bear and there were only two people involved in the actual price decision making. one of these individuals was the Managing Director and the other the Works Director, who undertook the task when the Managing Director was not available. Both directors operated according to the policy laid down but the range of profit applied as a percentage on total cost varied considerably between the two. The margin applied by the Works Director varied from +33⅓% to +150% whereas the margin used by the Managing Director ranged from +26% to +217%. It is also obvious from Table 1 in Case E_9 that the Managing Director's quotations tended to be lower than his colleague's for large volume enquiries and higher for the small, once only, type order. In both S_1 and E_9 the revenue expected from the prices determined by the most senior person involved was *less* than that of their immediate subordinates. This seems to suggest that the senior person may be a little more

sensitive to customer reaction, to the long term implications of pricing, and adjusts his prices accordingly.

Competitor oriented price policy

In the display industry three firms which professed to have a 'cost plus' price policy were subsequently found to depend mainly upon a competitor's prices and/or costing process; the competitor in this case was the preceived price leader in the area. The chief executive of all three companies stated that there were occasions when a special price was charged because of unusual circumstances. This special price could include a much higher profit margin than normal but could also mean an especially low price quoted to get a particular order.

In the pressmetal working industry two companies stated, and demonstrated that their catalogue prices for certain items were the same as their major competitor's. However this was not true of all catalogue items and there were examples of the less 'popular' items priced substantially above the competitor's price because the firm concerned 'knew' that the competitor was not interested in supplying that particular product in the small quantities normally demanded.

Cost oriented price policy

In addition to the three display companies mentioned in the previous section there were three others who stated that they normally added a fixed percentage to total cost. In each case, either by declaration or illustration, it was made clear that deviations did occur from time to time. In fact it proved quite difficult to find illustrations, during the survey, of any systematic cost plus pricing technique among the display firms.

Two firms in the pressmetal trade declated their price policy to be in the category. The chief executive of one of these quoted a margin of 20% on labour costs to cover profit and overheads but immediately provided illustration which did not conform with this pattern. In the other case it was not possible to verify the Managing Director's statement that 70% of the quotations issued to customers were at the 'standard price', but again there was a comment about deviating from this pattern when possible, or necessary.

Although statistically there is not a great deal of evidence, it appears that the process of delegating price decision making does produce significant changes in the level of prices charged and sometimes a deviation from the policy which the company has declared[88]. Even when the price decision making is not delegated there seems to be a general tendency to charge what the market will bear whenever there is sufficient knowledge to make this possible and prudent.

Chapter 8

It is now possible to review the findings of the whole survey. In this current chapter the empirical evidence is related to the theoretical basis of decision making and the relevant conclusions are drawn. There is, however, sufficient evidence available from the survey to suggest that a rather different 'marginal' approach may have been used by some companies and this is dealt with in Chapter 9.

Summary and conclusions

Considerable dissatisfaction has been expressed with the economic theory of the firm because of its inability to explain and predict decision making in real situations. This controversy has attracted the attention of academics from other disciplines with the result that a wider and more effective set of conceptual analytical tools is now being applied to the problem.

The main challenges to the traditional approach have concerned

1) the market conditions,
2) the organisational structure,
3) the motivational basis for decision making,

and 4) the postulate of perfect knowledge.

Market conditions

It is in this area that economists have been most active. The works of E. H. Chamberlin, J. Robinson, P. W. S. Andrews, F. Machlup, W. Fellner and others have gone a long way towards providing a more realistic framework of marketing conditions within which such a theory has to operate.

Organisational structure

Here the influence of the behavioural scientists is clearly apparent, indicating the significant split in the entrepreneurial functions between people who are active in the organisation and those who are not. What is significant about this development is the problem of communication which develops, and is amplified, as the organisation grows. Business men seem extremely reluctant to commit their thoughts and intentions to paper, despite Lord Brown's assertion that it is easier to change written objectives and policies than it is to change unwritten ones. Apart from the problem of communicating information there is the problem of distortion and time delay which occurs even when this is done.(89)

Motivational basis for decision making.

The relationship between company objectives and those of individuals responsible for particular kinds of decision making is of some significance Cyert and March[90] describe the inducement/contribution balance of individuals within an organisation which suggests that the result may well be a pattern of objectives which are not internally consistent. This is easily identified by such examples as the different output and profit levels arising from a conflict of objectives between the chief executive and the marketing manager if the latter should happen to be motivated towards maximisation of turnover.

An example of the deviation which may occur as a result of such conflicting objectives is provided in the report on S_1 and E_9 and summarised in Chapter 7.

Perfect knowledge

The problem of imperfect knowledge, of operating under conditions of uncertainty, has certainly occupied economists for a long time. Quite recently, however, the problem has begun to occupy the attention of marketing research workers who have been interested in developing a more effective marketing intelligence system. One of the analytical tools now being used to provide the marketing manager with a more effective information basis for decision making is that of statistical decision theory. This has been described[92] as "the science of making wise decisions in the face of uncertainty". The main references in this field are works by R. Schlaifer,[93] and H. Chernof and L. E. Moses[94] but there are many other articles and books now appearing, Ironically, perhaps, for a field of work so recently developed one of the statistical techniques now being utilised is that of Bayesian decision theory, a process originally conceived by an English clergyman, the Reverend Thomas Bayes, a Presbyterian minister and mathematician in the early 18th century.

Most of the research work carried out so far has been concerned with large organisations producing many products and selling in diverse markets. The result of this has been to exaggerate the emphasis given to the psychological and sociological aspects of the analysis without contributing a great deal to the basic economic concepts involved. There were, however, three relevant studies made of small firms which were reviewed earlier in this thesis. One of these took place in the U.K. and was conducted by Professor D. C. Hague, one took place in the United States of America and was conducted by Professor Warren Haynes, and the third in Denmark under the direction of Professor Fog. All three studies were attempts to relate the pricing decisions of small firms to the

concepts of the marginal analysis with interesting, if not conclusive results. This particular study was designed to restrict still further the diversity of the sample mix to see whether it would be possible to identify a little more clearly the objectives and principles underlying pricing policy and decision making in the small firm.

The contextual framework

There was a marked difference between the age profile of firms visited in the display industry and those in the press metal working trade. This is readily explained by the comparatively recent development of advertising and display work in this country and the tradition of metal working which goes back beyond the industrial revolution. There is also the fact that there was almost a complete cessation of commercial advertising during the war whereas the demand for the products of the metal working industry was sustained, if not increased.

There was also a significant difference in the owner/management relationships between firms in the two industries. In the display industry there were only three firms where the chief executive had no part in the ownership of the company, and only in one of these was there any real limitation of authority. Thus in 13 out of the 14 companies visited the chief executive(s) was also, effectively, the entrepreneur. In the pressmetal working industry 6 of the 12 firms visited were wholly owned subsidiaries of other companies and their chief executives had no part in the ownership of the company. However here also the chief executives were given almost complete freedom to run the company as they wished and exhibited many of the decision making characteristics attributed to the entrepreneur. From the decision making point of view, therefore, there appeared to be little difference between companies in the two industries and no significant deviation from the decision making characteristics of the concept of the entrepreneur assumed within the traditional theory of the firm.

Turnover per employee was higher in the pressmetal working firms than in the display firms mainly because of the higher cost of materials involved. The production process itself required rather more expensive machinery in the pressmetal trade but in neither industry were machines of a very sophisticated nature used.

The basic purpose, as defined by Pugh et al.,[95] in the display firms was to provide ideas and selling aids for public and private organisations. In the pressmetal trade firms were concerned to provide an engineering service by making component parts for manufacturers of motor vehicles and other domestic products, and proprietary goods for sale through the normal

distribution channels. The general impression gained from the chief executive of the privately owned firms in both industries was of a desire to be independent, not to get too involved with others in the Trade and to avoid Trade Union infiltration if possible.

Objectives

None of the firms visited in the two industries had produced a written statement of objectives and policies which had been formally issued to all managers in the organisation. Nevertheless the majority of companies had established a financial objective which had been built into the forward budget used as a basis for costing. The proportion of firms which had accomplished this intermediate step was significantly higher in the pressmetal industry than in the display field because of the greater average number of employees, larger average turnover, and a higher incidence of absent ownership.

In the survey it was possible, by probing and by inference, to identify three different types of objectives. The basic long term objectives appeared to be predominantly economic in character which coincided with the evidence obtained by Hague[96], Fog[97], and Haynes[98] though Haynes did make the point that it was possible to distinguish some non economic factors. Evidence emerging from the questionnaires sent out to a sample of local industrial firms was interesting in that it showed the change of emphasis from profitability in the long term for the smaller companies to an equal emphasis on growth and profitability for the larger company.

The emphasis in statements from all sources and sizes of firms concerning rationalised objectives was clearly on profitability. Again these were not written and again there was an interesting change in emphasis from small companies who appeared to primarily concerned with profitability related to turnover to the larger organisation which related profitability to capital employed. The exceptions, such as E_2, E_4, and E_7, were found to be firms which had recently had consultants to help them improve the company's financial system: The consultants had drawn the attention of the chief executive to the significance of capital employed although it was obvious in one case that this concept was not clearly understood. There was also a change in emphasis in the categories other than profitability. In smaller companies continuity was given greater precedence than growth whereas in the larger company this order was reversed.

The nature of the dominant objective varied from company to company and from time to time as was evidenced from the information obtained. During the period in which the survey was undertaken the total level of demand for the products of both industries was well below the

normal level and consequently, with minor exceptions, the dominant objective with most companies was to increase turnover and reduce costs.

Despite the verbal variations and the different levels of precision in the formulation of objectives it seems clear that most small companies were concerned, in a general way, with profit maximisation. The precision of some statement concerning a target rate of return of turnover on capital employed was found to be misleading because almost all of the chief executives concerned saw this as a minimum figure to be aimed at but refused to set the higher limit.

Policies

The literature of management sciences is littered with terms and concepts which duplicate, overlap, and contradict each other. Thus the same word may be used by two writers to identify entirely different concepts or the same concept may, conversely, acquire two or more titles. The word policy is one of those which is used somewhat indiscriminately to describe a variety of concepts ranging from objectives down to detailed plans and procedures. It is vital that the manager and student should be aware of this confusion and develop for themselves a framework of concepts (and labels) which has some significance and which they are able to use to communicate their ideas to other people.

For this reason the word policy has been defined as the guideline established at one level in the management hierarchy to identify the tolerances within which decisions may be taken at a subordinate level. Within the general framework of business policies there are marketing policies, and within marketing policies one finds pricing policy. Businessmen seem just as reluctant to put policy statements in writing as they are to issue objectives in that form. Furthermore there are many businessmen and quite a few academics who fail to differentiate between price policy and price decision making. Where these two functions are carried out by a single individual the differentiation becomes significant only when the decisions taken tend to be inconsistent, the real significance becomes apparent when the pricing decisions have to be delegated to a subordinate.

Pricing Policy

The relative importance of price in the marketing mix does obviously vary from product to product and from time to time along a product's life cycle. Price was not considered to be the most important variable in the mix for non catalogue items in either the display industry or the press metal trade. Most firms placed quality and delivery above price in order of priority and this coincided with the preferences indicated by some of their major customers.

The results obtained from the survey also support this evidence but for small firms only. Larger firms felt that their markets were more sensitive to price than they were to quality or delivery or service.

A company may have one pricing policy which applies to all products in all markets at all times. This, however, is an unusual and rather dangerous practice and there are many reasons why a good marketing executive will vary his pricing policy to suit the particular phase of the product life cycle or when other abnormal market conditions make it necessary. This presupposes that the company is able to obtain sufficient information about the market to enable it to determine the most appropriate policy to use. The greater the amount of knowledge available about 'demand', the easier is it for the price decision maker to move towards the price which the market will bear. All the surveys which have been quoted previously indicate deviations from 'competitive' or 'cost oriented' policies when the opportunity presents itself. The firms in this survey exhibit exactly the same tendency though in this case most of them do profess to charge what the market will bear.

The majority of the firms visited provided sufficient evidence to justify placing them in the customer oriented pricing policy category. Three display firms were found to have a competitive price policy and three a cost plus policy, but even these firms indicated that there were many deviations from policy. This was true also of the two firms who professed to have a competitive price policy, and two who had a 'cost plus' policy in the pressmetal industry. Some of these deviations were explained by reference to competition, or to 'unusual' circumstances, and it is possible that these firms might also have justified inclusion in the first category but access to information which could have provided the evidence was denied. The conclusion must, therefore, remain a tentative one until such time as the information does become available. It is interesting to note that those firms in the competitive price policy category implemented their policy by imitating the overhead cost allocation of the price leader because it was not possible to obtain a precise price comparison, but although the addition of 200% on labour costs did coincide with one of the cases illustrated from D_{11} the other cases showed rather different percentage allocations.

There are other types of pricing policy which are concerned with the relationships between products in the same 'line' or 'group', and with the form in which the prices are issued. These are important and do affect the relationship between the supplier, the distributor, and the

customer and are illustrated in the companies which sell standard lines from a catalogue.

The particular kind of pricing policy adopted by a company depends to a large extent upon the company's objectives and the perceived knowledge of the market. If, as was suggested above, it is assumed that companies are normally concerned to maximise profit then the major remaining factor is the level of perceived knowledge.

The evidence obtained during the survey and the impression gained during the interviews suggested that in situations where there was clear knowledge about the customer's situation the price policy, and the pricing decision, was to charge what the market would bear. This was generally implemented in an enlightened way, i.e., bearing in mind the long term effect.

Knowledge of this kind came through the normal sources such as salesmen, competitors, the Trade Association, 'friends' in the trade, etc., but also from the customers themselves. There was positive evidence, both from the customers and the suppliers, of situations where the customer himself created a monopoly situation for the supplier. This was sometimes due to bad planning, or because of a time constraint over which the purchaser had little control, or because of a 'peculiar' requirement by the purchaser which effectively restricted the number of possible suppliers; as with company C_4.

Where the amount of information available to the company about its market was more limited companies tended to adopt a 'cost-plus' pricing policy. This decision was based upon the premise that while the chief executive knew that the market would stand a normal mark-up of x% he was unable to decide how much more the price could be raised. Changes in inventory, the order book position, and plant utilisation were watched very carefully in these companies to supplement whatsoever knowledge was available about the market situation.

Where there is still less information available about the market the supplier tends to look for inferred supplementary information. This is normally obtained, or assumed, from competitors' prices and the pricing policy adopted is that of following a competitor, or the perceived price leader. There was some evidence of this in three of the firms visited in the display industry and all three saw D_{11} as the price leader. In the pressmetal working industry two firms 'followed' their major competitor but in this case the procedure was much simpler because the price leader issued a price list which was readily available to competitors as well as customers.

It was interesting, however, to find that some companies with 'adequate' knowledge of the customer situation used a 'cost plus' approach to pricing. This was mainly because the

actual pricing decision was delegated to someone lower down in the organisation. If the policy maker and decision taker were in juxtaposition then important items of information about the customer situation were sometimes communicated to the former person and the policy is 'adjusted' accordingly. If the two persons concerned were separate by one or more levels in the organisation the communication system did not seem to operate in the same way, the delegation was much more formalised and the personal objectives and motivations were sufficiently different to inhibit the flexibility enjoyed by the one person system, or the rather more limited flexibility possible in the two person arrangement.

Pricing Techniques

All firms covered during the survey had evolved a costing system which formed the basis for the pricing decision. The total cost calculated included overheads and was generally seen as the floor below which the prices should not go. The profit margin included in the 'costing' process gave a further guideline which many executives found helpful but rarely did they adhere to this figure.

The costing process itself ranged from a simple allocation of overheads to a complex, and sometimes devious, calculation. The range of overhead percentage additions to labour costs extended from 18½% in the case of D_{14} to 230% in the case of D_{11}; and yet both firms appeared reasonably profitable. There was, in the case of D_{14}, an interesting problem of interfactory costing which tended to obscure the real profit position from the casual observer. In the pressmetal working firms the percentage added to direct labour cost to cover overheads ranged from +25% to over 700% in one cost centre in firm E_4.

There were three discernible time bases upon which the costs were calculated. In some cases the direct and indirect overheads and handling charges were determined by reference to historical data; in other cases this information was brought up to date by adding a fixed percentage to compensate for increased labour costs etc; and in the other companies the costing was based upon a budget estimate for the ensuing year. The flexibility of the margin used effectively disposed of any correlation there might have been between profitability and the costing basis involved. Thus D_9, which utilised a forward budget as a basis for costing, was probably one of the least profitable companies covered by the survey. What is sometimes overlooked is the fact that if one company budgets on the basis of anticipated costs and the competitors do not then that firm would be at a serious disadvantage in the short period if the market was a very competitive one.

The variations in profit margins applied were quite considerable. In the display firms the deviations from the 'standard price' ranged from −18% to +70%; and in the pressmetal working firms from −22% to +217%.The lower figures demonstrate quite clearly that in some cases the prices quoted were little higher than the direct cost of labour and materials involved. This was confirmed by people in both industries who quoted cases where a competitor had 'transgressed'. Such an event, it appeared, was a very rare occurence and only happened when business was really bad. In the display industry the upper limit for most firms seemed to lie in the magic figure of +100%. This was not quite so apparent in the metal trade although very few firms ventured above that figure.

It was difficult also to pinpoint cases of experimental behaviour where a company was testing out its competitor. D_8 provided one illustration of price reduction to stimulate demand. This, it was concluded, was not the answer to that particular problem and the price was returned to its previous level. D_{12} quoted the case of an exaggerated price which was set to test the opposition but the bargaining in this instance did not progress beyond the 'normal' price level and the competitor obtained the order. Despite the differentiated nature of the product sellers seemed able to obtain information about competitors' prices and were quite outspoken in their criticisms when a 'silly' price was being quoted by someone in the industry.

Conclusions

The display producing and screen printing industry and the press metal working industry fall into the oligopolistic market category which Fellner[99] describes as 'fewness'. A small number of buyers and a small number of sellers account for a significant portion of the market. The product is differentiated and, as might be expected, the emphasis is on competition through variables other than price. Participants in the industry do negotiate with each other but do so implicitly rather than explicitly. The agreements reached are also implicit but appear to have fairly general support.

The typical small firm in each industry is probably much closer in character to the classical economic concept of the entrepreneur than in most other industries. In most of the smaller companies, and indeed in many of the larger ones, price policy and price decision making is undertaken by the same person. Thus, apart from the possibility of inconsistencies arising in the decisions made over a period of time it is difficult to identify any discrepancies of decision making between the policy maker and the decision maker. Where these functions are

carried out separately there is evidence of a significant variance arising which could be atrributed to differences in the motivational basis of decision making.

Classical economic theory assumed that the basic objective of the firm was to maximise profit. While the firms covered by the survey did not have written statements of objectives which coincided with this basic concept, the statements made both explicitly indicated that most firms conformed in a fairly general way with this idea.

There was no evidence whatever that any of the executives interviewed understood the concepts of the marginal analysis in academic terms. This does not mean, however, that they were unaware of principles underlying the marginal analysis and did not seek to implement them. There was some indication that the short run marginal (or incremental) cost in most firms was fairly stable over much of the output range, as was suggested by Professor Hague and P. Wiles. It also seems true that executives did attempt to operate at the optimum output level and were able to 'feel' the point at which long run marginal cost (partial adaptation) began to rise. This may be because of the indivisibilities involved in the factors which made up marginal cost and the fact that these did not all reach optimum level at the same point of outpoint. The difficulty which most firms in the industry had in achieving the optimum level of output was partly due to the sporadic and 'chunky' nature of demand, but also to the fact that there was so much excess capacity available.

The marginal analysis implies restriction of output in order to increase profitability. This, Fog argues, is unpalatable to many businessmen. Put in that way the businessman may well reject the idea of output restriction. However, the principle of subcontracting is quite prevalent in a number of industries including the two investigated. This may be regarded as a deliberate attempt to restrict one's own output and to use the subcontracting process as a buffer against fluctuations in demand. In this way the principle of output restriction was accepted, and implemented. In accounting language also the subcontracting process provided the company with a clear marginal cost for that volume of output which is placed with other producers.

The firms in the display industry were very much aware of the significance of demand but tended to look at it on a discrete, ad hoc, basis because of the differentiated nature of the product and the lumpiness of the order pattern. There was no conscious awareness of a life cycle pattern although many executives felt that the market was becoming more competitive. The general assessment of the significance of factors in the marketing mix corresponds closely with

the opinions of some of the larger customers and the emphasis in both cases is upon non price variables. Detailed knowledge of a customer's needs, attitude, and buying behaviour was patchy; i.e. these details were known for some customers but not for others; and the amount of knowledge for one company also varied from time to time. There were occasions when the customer, by his own action, presented the supplier with an explicit and identifiable monopoly situation. Such situations were generally exploited by the supplier, albeit in an 'enlightened' way.

The firms in the press metal working industry were also very much aware of the significance of demand but again considered it mainly in discrete terms because of the lumpiness of the order pattern. The comments made above about the life cycle pattern and marketing mix is just as relevant here and the knowledge equally 'patchy'. There were also occasions when the customer created his own supplier monopoly position which was exploited by the supplier.

The marginal order cost approach

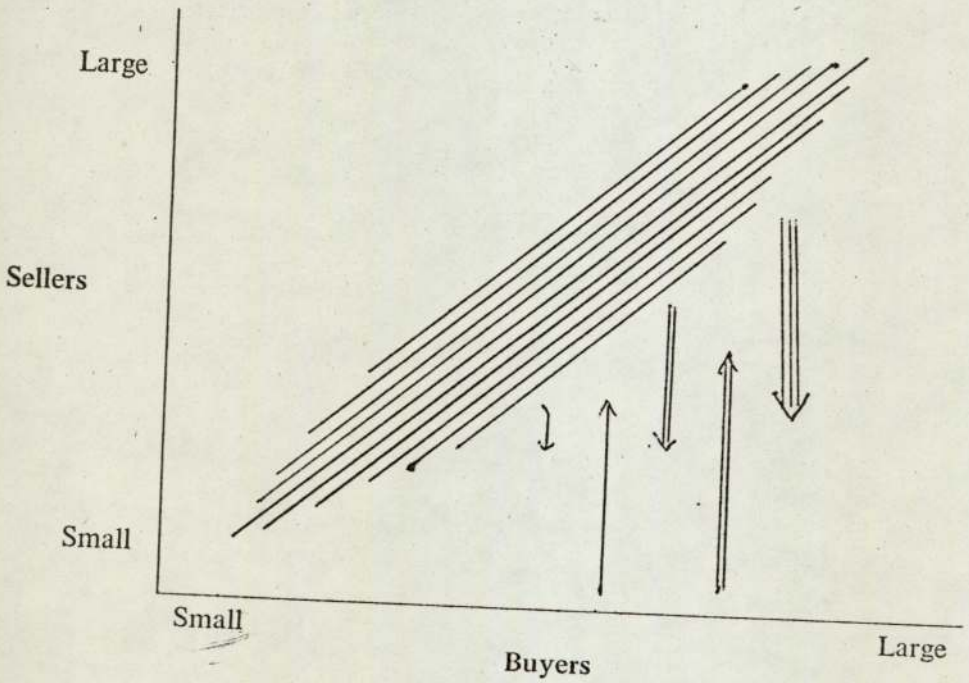
It was clear from the survey that very few of the executives interviewed understood the concepts of the marginal analysis and that no one attempted to implement the theory in its traditional form. There were indications, however, that some had devised a cruder, more practical, marginal approach which, under the circumstances, was appropriate and reasonably effective. The assumptions underlying this new approach and some evidence of its application in the firms visited are given below.

This investigation was concerned with companies employing less than 250 people in the display and press metal industries and this analysis must therefore be restricted to those organisations. The market condition of both groups of companies may be described as that of differentiated oligopoly, and within that category under the particular subgroup described by Fellner[101] as 'fewness'. Fewness is described as the state of affairs which exists when a small number of buyers and a small number of seliers account for a significant fraction of the market. There is a larger number of smaller firms who account for the remaining share of the market but who are significantly effected by the policies of the larger firms.

The relationships between large and small firms on the supply and purchasing side of the two industries may be illustrated diagrammatically as in Figure 12 below.

Figure 12

Order Profile



Under these conditions large suppliers receive most of the big orders from the large purchasing companies and small suppliers receive most of the smaller orders from small purchasing companies. This was true of the firms int he two industries concerned but there was also an interesting relationship between the large and the small firms in each industry; the large firms frequently subcontracted portions of orders they had received to the smaller firms and occasionally a small firm would 'factor' a large order it had been able to obtain to one of the large companies because it did not have the capacity to deal with that volume of work itself. This inter company trading provided a useful source of information about a competitor's prices, delivery dates, and quality for many of the firms in both industries.

The product differentiation was based upon the fact that each individual order was normally made to the customer's specification. In the display industry this differentiation was often exaggerated by the creative quality of the idea contained in the 'product'; in the press metal industry the differentiation was less conspicuous but was concerned mainly with the technical and marketing service which surrounded the product. Nevertheless even in the press metal working industry there was always some physical product differentiation present because no two firms produce identical products from the same specification. One important consequence of the nature of the product involved is that the producer normally needs a certain amount of time to acquire the necessary materials, to make or purchase the jigs and tools required, and to programme production.

There was very little restriction on entry to the display producing industry and the amount of capital required was very small. The main entry criteria seemed to be creative ability and the technical skill necessary to implement it. At the 'lighter' end of the press metal trade the same kind of comment was appropriate; there was very little restriction on entry, the amount of capital required was rather more than for the display firms but still not sufficient to present a real barrier. Rather less creative skill was required in the latter industry but obviously some engineering knowledge and skill was necessary in order to maintain the machinery. The technical knowledge required was not, however, at a very sophisticated level. The contextual profile of the display firms visited revealed a predominance of first generation firms with a high correlation between ownership and management control. The centralised source of decision making and the informal communication systems employed in these firms suggests that they do not differ significantly in character from the traditional view of organisation identified with the concept

of the 'entrepreneur'. Firms in the press metal industry were much older and had quite different owner-management relationships but, nevertheless, seemed to exhibit very similar decision making characteristics and communication processes and may thus be grouped with display firms into the 'entrepreneurial' category.

The point has been made above that while the firms covered by the survey did not have written statements of objectives which coincided with the profit maximisation hypothesis the evidence obtained did indicate that most firms conformed, in a fairly general way, with this objective. The marginal order cost approach accepts this as sufficient evidence to continue using profit maximisation as the dominant motivational basis of decision making.

The economic theory of the firm assumes that output is determined, and profit maximised, when a firm's marginal revenue is equated with its marginal cost. This presupposes demand and cost functions which are not determinable either in a static or dynamic form in the two groups of firms investigated. The result was that firms considered each enquiry as a discrete event and regarded the total volume of enquiries in any one significant time period, i.e. day, week, or month, as its potential demand for that period. The total volume of orders received in the same period formed its actual demand.

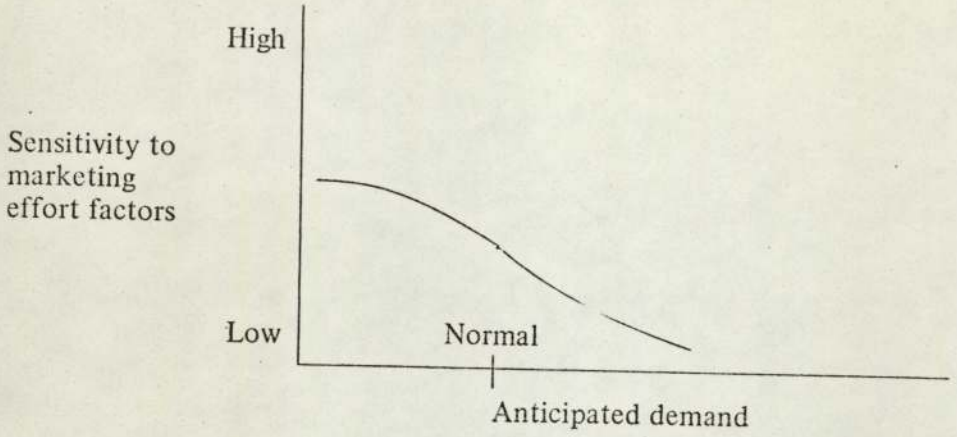
Marginal order revenue

Within the static equilibrium analysis it is assumed that the firm is able to determine the demand function for a particular future date and is able to alter its output so that the conditions of partial marginal equilibrium are achieved at that point in time. In the display industry and the pressed metal trade it was not possible to determine a demand function for products made to customer specification except where the customer required delivery over an extended period of time. But in either case, whether the order was for extended delivery or not, no work was programmed or produced without an order being placed.(*)

The day to day view of demand appropriate to these two groups of firms meant that their view of the market's response to marketing effort factors was rather different from the Michwitz approach. The perceived sensitivity to marketing effort varied when demand in any significant time period was above or below the normal level. This is illustrated in Figure 13 below.

(*) It should be noted that this analysis is not concerned with thosproprietary and standard items sold by some of the firms visited and normally available 'ex stock'.

Figure 13



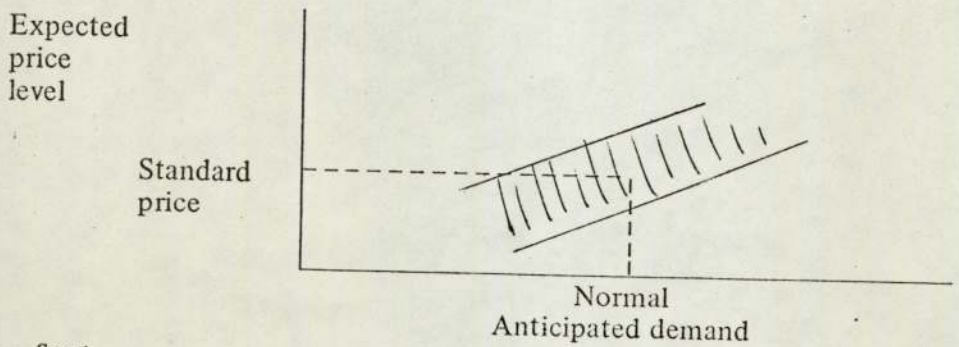
The marketing effort factors concerned would include such things as the sales force, price, advertising, quality, delivery, after sales service, and technical co-operation.

Thus the sensitivity of buyers to marketing effort factors increases as demand falls below the normal level and, by implication, leaves excess capacity in the supply industry. The upper limit of sensitivity is theoretically where the buyer's opportunity marginal cost of search is equated with the marginal revenue (benefit) arising therefrom. It is important to note, however, that an excess of one marketing variable may also bring an adverse reaction from the buyer. Thus the buyer has a perception of the price/quality relationship which generates suspicion when the price quoted falls below what he considers to be a feasible level.(*) The sensitivity to marketing factors diminishes as demand increases and excess production capacity is used up but it never disappears entirely.

This discrete approach to demand produces an unexpected view of the relationship between price and quantity. In this case when demand is below the normal level suppliers except prices to be lower and vice versa. The different amount and quality of information available concerning each potential customer results in a 'band' of possible expected prices which may be illustrated as follows:

Figure 14

Supplier's Expected Price Level



(*) See the experiments carried out by A. Gabor and C. Granger, , op.cit. (84).

Marginal order cost

Because of the unique combination of materials, tools, setting and processing time involved in each order firms in both industries had found it necessary to devise a costing system which would identify the individual elements concerned. The illustrations provided earlier show a wide range of sophistication among these firms but there were still some among the more enlightened organisations who felt that it was not possible to be more accurate than $\pm$ 10% of the true figure; the assumption was then made that the calculated cost was lower than the true figure and a 10% margin was added for safety.

The individual items identified within the systems used included the following:

a.) bought out components and other subcontracted work;

b.) material cost– and waste reclamation;

c.) labour; effective hours related to individual cost centres and levels of skill;

d.) tooling costs;

e.) special discounts for the customer and/or agent;

f.) special distribution costs, e.g. packing and transport;

g.) overhead costs;

h.) profit margin.

The differentiated nature of the product and the unique combination of resources required to produce the order meant that there was almost invariably a delay between the receipt of the order and its implementation. From a practical point of view, therefore, this meant that the total direct costs involved were also 'escapable' costs and that the direct order costs could be regarded as the marginal order cost. It should be noted, however, that the disposal of labour assumed above depends also upon the personnel policy of the company concerned and the strength of the Trade Union, if any, involved. There is now one further qualification which should be borne in mind when discussing this question. Although technically it may be possible to dispose of labour within the time period specified recent legislation has imposed a cost of doing so. Since it would be extremely difficult to incorporate such a cost into the marginal order cost method described above it has been considered appropriate to mentioned it but exclude it from the analysis.

Items a) to f) in the above list thus comprised the marginal order cost. Nothing would be gained in analytical terms by reducing the marginal order cost and marginal order

revenue to unit cost and revenue figures. However, be this as it may, there were illustrations where companies issued quotations on a unit basis which seems to contradict the previous statement. In fact this was not so because the calculation upon which the quotation was based involved the total order and the unit quotation used was either for convenience in doing the arithmetic or in accordance witht he practice of the trade.

It is possible at this point to distinguish three different marginal order costs as perceived by the small firm. Using Wiles[100] terminology these may be classified in the following manner.

Short run marginal order cost (partial adaptation)

This is seen as the total of direct variable costs which would be incurred if the order was received and executed without any alteration of the fixed assets of the company. It is not possible to argue, as Wiles does, that s.r.m.c.(p.a.) is an average concept to the entrepreneur because s.r.m.o.c.(p.a.) is related to the order and not the unit but it is true, nevertheless, that the labour and material costs involved may be based upon an 'average' or 'normal' unit. Thus over a considerable range of output the s.r.m.o.c. (p.a.) would not change; the significant movement would be similar to that portrayed in the Wiles paper, i.e. an upward movement at near capacity output resulting from the lack of coincidence in the physical indivisibilities present in every firm.

Within this s.r.m.o.c.(p.a.) category the entrepreneur includes the orders produced within his own organisation and those subcontracted to other firms. There is a significant difference between the level of costs involved but the subcontracting process extends the output capacity of an individual company without incurring the abnormal high costs which would arise from overtime, weekend, and holiday working etc.

Long run marginal order cost (partial adaptation).

This is similar in character to the s.r.m.o.c.(p.a.) but includes the hidden costs of operating above the optimum level of output, i.e. the additional machinery or labour costs involved in working excessive hours.

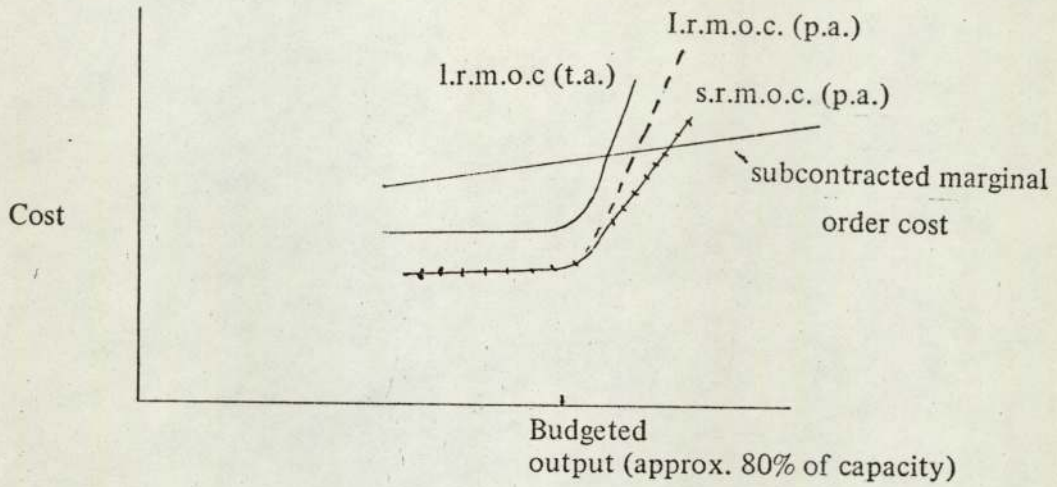
Long run marginal order cost (total adaptation).

In this case the l.r.m.o.c.(t.a) is seen as the total order cost, including overheads, when working at budgeted output.

The cost position, as perceived by the entrepreneur in the small company offering a differentiated product is thus represented diagrammatically below.

Figure 15

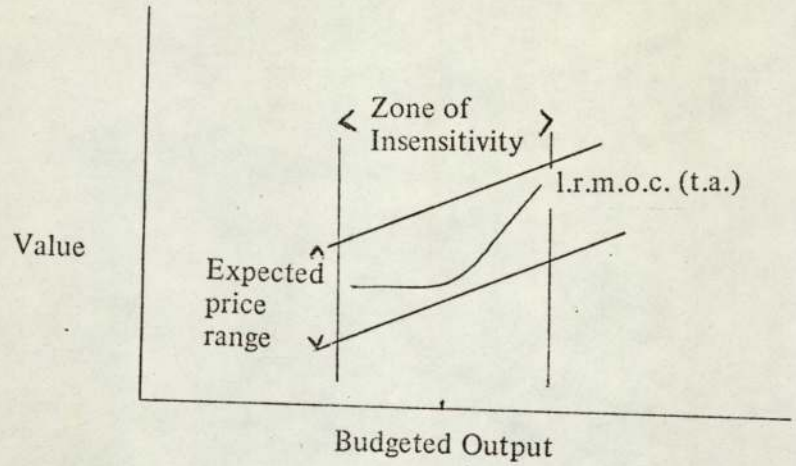
Perceived marginal order costs



The implementation of the marginal order analysis in practice suffers from the same difficulties that face companies in their attempt to identify cost and revenue functions, that is the lack of adequate information. This shortage of information in quantity, quality, and timing creates for the entrepreneur a 'zone of insensitivity' around the budgeted output level which is responsible for much of the financial problems these firms experience.

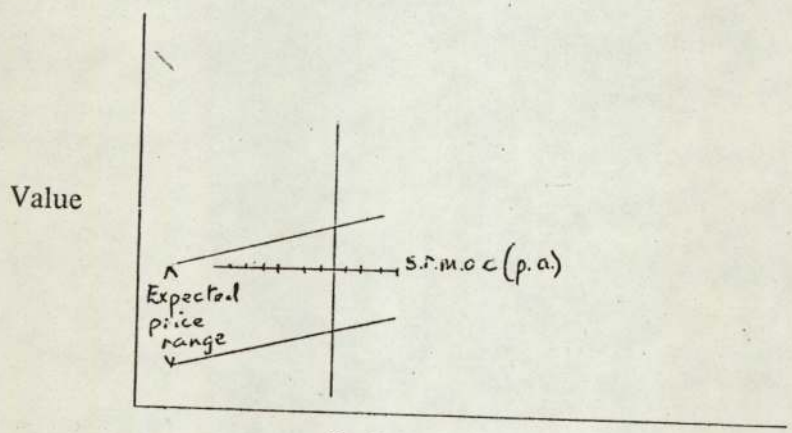
Often the entrepreneur is obliged to rely upon his visual perception of the level of activity, a subjective process liable to a wide margin of error. Experience in some of the companies concerned showed that this margin could be as much as 50% in one direction, i.e. the level of activity could be perceived as that budgeted for but could actually be much lower; and 10/15% in the other direction. Excess work loading tends to become 'visible' more quickly because of overtime working. Thus there is normally a significant range of output in small companies over which precise and rapid measurement is difficult. The result of this is that the chief executive frequently assumes that the flow of orders is in line with his budgetted output and uses the l.r.m.o.c. (t.a.) as the base line below which his prices should not fall and may, therefore, lose orders by not adjusting his prices when output is below the budgeted level. See Figure 16. The possible effect of this insensitivity on profit is obvious, but in small firms is often not perceived until the accounts are prepared and presented long after the 'event' has occured.

Figure 16



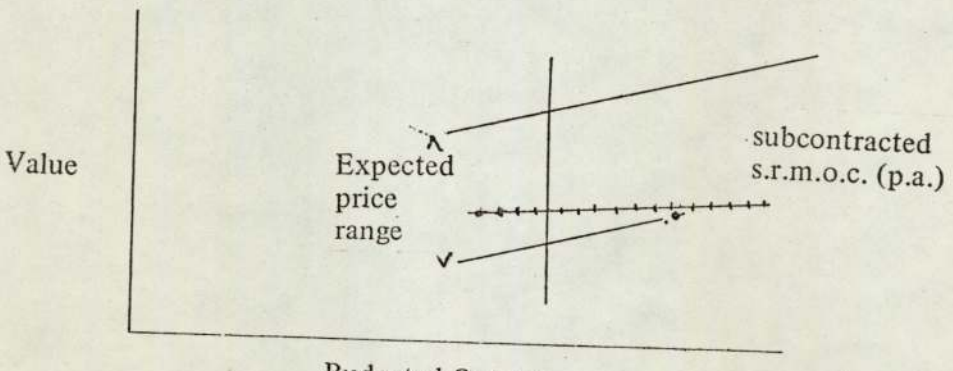
When the flow of orders was clearly below budgeted output entrepreneurs used the s.r.m.o.c. (p.a.) as the level below which prices should not fall. This provided an opportunity for quoting prices which might stimulate the flow of orders thereby correcting the short term position and increasing the contribution. See figure 17.

Figure 17



When the flow of orders exceeded the budgeted output level entrepreneurs tended to adopt the subcontracted s.r.m.o.c. (p.a.) level as the base line for prices. It was relatively easy to obtain a quotation from other suppliers for work wholly or partially subcontracted and this enabled the entrepreneur to adjust his prices fairly quickly. See Figure 18.

Figure 18



Because of the imprecise nature of information available the individual entrepreneur's reaction to a particular market and output situation may thus have been rather slow but, within the limits of his perceived knowledge it would appear that he did attempt to equate marginal order cost and marginal order revenue thereby achieving an optimum output level and, in a general way, profit maximisation.