

University of South Wales



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MARKETING STRATEGY AND COMPANY PERFORMANCE IN THE
U.K. CONSTRUCTION INDUSTRY

BY

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A dissertation submitted in partial fulfilment of the requirements for the award of the degree of Master of Philosophy of the Council for National Academic Awards.

Sponsoring Establishment: The Polytechnic of Wales

Collaborating Establishment: Security Fencing Ltd.

Submitted: Month - May
Year - 1987

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ACKNOWLEDGEMENTS

The author wishes to express his gratitude to all the people who have helped in the execution of this study. My supervisors, Barry Davies and Professor Tony Gear for their encouragement and advice. Mr. W.T.K.P. Williams of Savory Milln for his patience; Dr. Ray Kingdon of the Polytechnic of Wales, Computing Department, for his invaluable guidance and the members of the Institute of Marketing Construction Industry Group for responding to the questionnaire.

A special thanks must go to Ann Norville and Allison Marks for word processing and editing.

Finally, a very special thanks to Dr. Colin Baker who provided much needed motivation to complete the study.

DECLARATION

While registered as a candidate for the Degree of which this submission is made I have not been a registered candidate for another award of the CNAA or of a University during the research programme and no material contained in the thesis has been used in any other submission for an academic award nor has any of the material been published in advance.

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ABSTRACT

Marketing Strategy and Company Performance in the U.K. Construction Industry - E. Davies.

The U.K. Construction Industry holds a major place in the British economy. The industry is a complex interaction of a number of different types of organisations. At the hub of the industry is the "Main Contractor", - the organisations that co-ordinate and execute construction projects.

Like many non consumer based industries, the Construction Industry has been slow to adopt the 'marketing concept'. This concept suggests a totally new way of looking at a business and would mean a departure from the traditional approach to the management of Main Contractor companies.

Many researchers have explored the relationship between marketing orientation (in a number of forms) and company performance. The consensus of opinion is that such an approach to running a business can result in improved financial performance.

This study has set out to investigate the relationship between a marketing orientation and company performance in the U.K. Construction Industry.

The results, in general, support the findings of earlier research and suggest that Executives of Main Contractor organisations should give serious consideration to the adoption of a marketing oriented approach to the management and direction of their firms.

CHAPTER ONE

AN INTRODUCTION TO THE PROBLEM AND ITS SETTING

1.1. PREAMBLE

"Man's ability to conceive, plan and erect the structure and building that his contemporary society required has played a formative, integral and important part in the development of civilisation throughout the world". Dolan (1979).

The Construction Industry is involved in many aspects of our life; from a purely utilitarian level of providing shelter, to a building as a work of art.

The industry also has an important place in the U.K. economy. In 1983 the gross domestic output (G.D.P.) of the U.K Construction Industry accounted for some 5% of total U.K. G.D.P., (Source: C.S.O., U.K. National Accounts 1985). On another dimension, the U.K. Construction industry accounted for 4.8% of employees in employment at June 1984, (Source: Regional Trends No. 20, 1985).

The industry has a distinctive character which separates it sharply from other manufacturing industries. G.C. Allen (1956) identified four major areas:

- 1) The product is manufactured, not in a factory, but at its place of intended consumption. This is generally true today, although prefabrication "off site", is becoming more widely used.
- 2) Building can be regarded as a 'sheltered' industry, for although some firms are active overseas, the finished product cannot be exported.

- 3) Each contract is unique in one facet, i.e. although the building may be similar to an earlier construction, its position will be different.
- 4) The structure of the industry i.e. the relationship between client, professional advisers (Architects and Quantity Surveyors), main contractors, sub-contractors, merchants and manufacturers.

There are two further areas worth considering. Firstly, the industry appears to be unstable - note, the number of company liquidations per annum in the construction industry compared with the economy as a whole. However, the industry also appears to be reasonably stable in terms of the proportion of work executed by the various industry scales over a period of time. Table 1 demonstrates this point.

Table 1

% value of output per group

	<u>3rd Quarter of Each Year</u>					<u>£m</u>
No. of Employees	1980	1981	1982	1983	1984	
1 - 34	38	39	41	45	45	
35 - 114	16	16	17	17	16	
115 - 1199	32	31	28	26	26	
1200 +	14	14	14	12	13	
Percentage Total: All Firms	100	100	100	100	100	

Source: Housing and Construction Statistics: H.M.S.O. 1985

Secondly, the central problem of the industry is the effect of government policy on flow of work, i.e. the use of the industry as a macro economic tool. The government is, in fact, the largest customer of the industry, accounting for half its output (Source: Housing and Construction Statistics 1980), and often the industry is prevented from achieving full potential because of problems of forecasting demand. To quote Sir Harold Emmerson (1962),

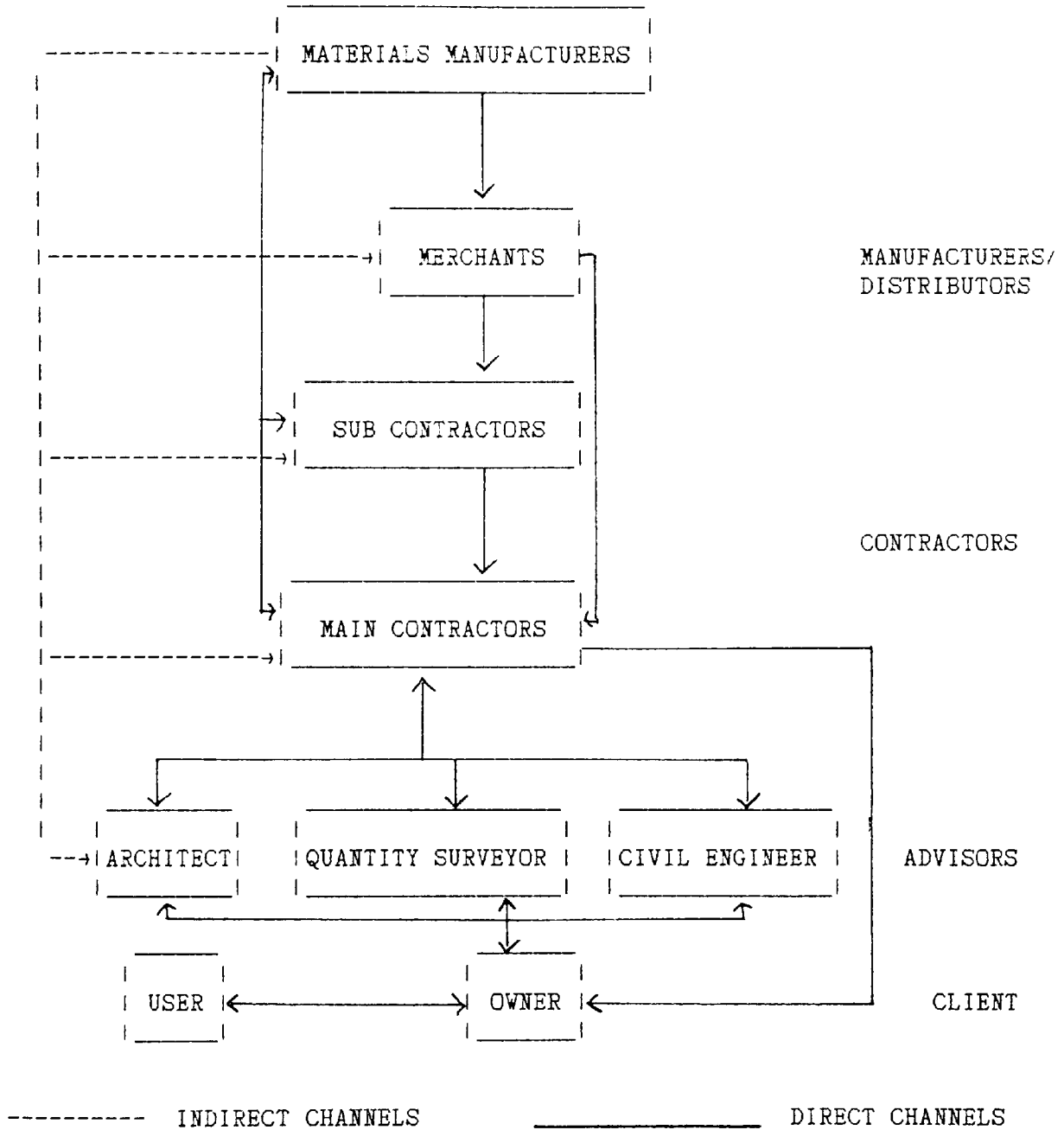
"...confidence in the future must be inspired by realistic forward planning on a national basis and central government should realise its responsibilities towards the industry".

To return to the structure of the industry, certain features also stand out:

- 1) There is no one company that dominates the industry. In many other developed industries, an oligopolistic stage is reached with one market leader company and a small number of other strong companies.
- 2) The actual structure of the industry sets it apart from other industries because a special professional group acts between the customer (the client) and the 'producer' - the Main Contractor. Fig. 1 describes the flow of communications between the various groups in the industry and shows the "professionals" key position.

Fig. 1

COMMUNICATION CHANNELS IN THE U.K.
CONSTRUCTION INDUSTRY



Source: Hardy & Davies - European Journal of Marketing - Jan. 1983.

3) Because of the industry's structure and general conservatism, the 'marketing concept' has been poorly adopted by the construction industry. A Leader article (The Builder, 15th November 1976), commented as follows:

"All the financial efficiency and construction planning and control which can be exploited can do no more than minimise losses if effort is directed to the wrong kind of contract".

"Creating a customer, finding a potential market, evaluating capacity planning ahead the strategy of a building enterprise - these exciting aspects of building activity really must interest someone."

The construction industry was reluctant to accept the marketing concept - i.e. understanding and satisfying customer demand leads to improved performance, because it believed if the product/service was good enough it would sell itself i.e. an emphasis on "production". Also, the Main Contractor traditionally had a passive role until the bills of quantity were forwarded to him by the Quantity Surveyor/Architect. Therefore, his main marketing 'tool' was that of the "price" he submitted as a tender.

In 1974, the Institute of Marketing, Construction Industry Group published a document which highlighted four industry characteristics which should encourage companies to adopt the concept:

- 1) The random nature of work loads.
- 2) High competition and low margins.
- 3) The need to exploit changes in the industry which can lead to new segments.

4) Development of indirect competition i.e. the "supply and fix" manufacturers.

Owen Luder (1970), a leading Architect, said:

"Building is ripe for new materials, new techniques, new ideas, new organisations."

The factors highlighted here, militated against the adoption of the marketing concept because senior management were sceptical about the benefits of reorganising their companies' approach to the market place.

Wilson (1968) says that many industrial goods/service industries were not as quick as consumer goods/service industries to perceive the benefits of marketing, but the construction industry has continued to resist change. Whilst saying this, there are perceptible changes occurring in the industry. Bell's study of 1980 identified a changing attitude to marketing, albeit that the respondents' understanding of the concept was still coloured by a production orientation.

The central problem seems to be the development of a body of research work that can objectively assess the value of marketing strategy in the context of this particular industry, and the presentation of this data to senior management. The method chosen for this research will be a comparison of "marketing oriented" and "non-marketing oriented" companies on a set of performance indicators to assess if there are statistically significant differences in the performance of the

groups. The expectation is that the former group will out-perform the latter on the performance indicators.

The rest of this chapter will be organised as follows:-

1.2 The sub-problems

1.3 The hypothesis

1.4 The delimitations

1.5 Definitions of terms

1.6 The assumptions

1.7 The need for the study

1.8 The organisation of the rest of the thesis

1.2. THE SUB-PROBLEMS

As Leedy (1974) points out, research develops through the sub-problems to the main problem. This division can facilitate a clearer understanding of the problem. A statement of the sub-problems may include the following:

- 1) In the introduction, reference was made to the word "marketing" and the phrase, "marketing orientation". It is important to clarify what these terms mean, particularly in the context of the industry.
- 2) The introduction also assumed that a "marketing orientation", leads to improved performance for the particular company. It is necessary to review the research to date to substantiate this assumption.

- 3) A need to discuss marketing in terms of the U.K. construction industry's history, current structure, management practices, trends, segments, and relationship between and perceptions of the main protagonists. Not all of this data is easily available.
- 4) The research methodology must be carefully designed to account for problems both common to research generally, and specific to this project. An example of the latter would be the effect of comparing two companies that operate in significantly different segments e.g. new house-building (private sector) and roads and bridges, (a detailed research methodology will be discussed later).
- 5) Careful consideration of the indicators of company performance must be made to ensure that, as far as possible, comparisons of "like with like", are being made.

1.3. THE HYPOTHESIS

The hypothesis developed from the initial research reading and is defined as follows:-

Companies who adopt formally developed marketing strategies will, when compared with similar, non-marketing oriented companies operating in the same market, perform at a higher level in terms of the major performance measures.

This hypothesis can be operationalised by:-

- 1) A comparison of the performance of firms operating in the same market.
- 2) A dichotomy of these firms into 'marketing' and 'non-marketing' groups.
- 3) A comparison of the performance of each group.

1.4. DELIMITATIONS

In considering the research it can be seen that it is necessary to limit the sphere of research in three broad areas:

- 1) Geographical.
- 2) Chronological.
- 3) Type of company.

1) Geographical

Most U.K based construction companies tend to derive the largest part of their turnover from the U.K. However, there are notable exceptions e.g. Costain who averaged 62% of their turnover, 1980-1983, from overseas markets. In fact, Costain received the Queen's Award for Export Achievement in 1983. A review of the 54 companies covered by Savory Milln's research in 1984 shows 34 companies having no export activity whatsoever.

There are obvious complexities attached to export activity for all types of industry, but these problems are accentuated for Main Contractors, e.g. using labour of the country involved, sources of basic materials, building regulations, contractual variations, etc.

This research is therefore concerned only with the companies' activity within the U.K.

2) Chronological

There are five factors which led to the adoption of a three year period of study i.e. 1980-1982.

- a) The nature of the trade cycle for the industry produces peaks and troughs which, to a large degree, are the function of government action and general economic optimism/pessimism. This cycle appears to be reducing in velocity (i.e. the difference between peaks and troughs). This is represented in Table 2 and Fig. 2. It was considered necessary, therefore, to adopt a period that would cover a reasonable mix of trading.
- b) Inclement weather and other site factors can have a marked influence on value of work done, again it was hoped that any abnormal conditions would be reduced in impact by using a three year period.
- c) Virtually all payment terms are based on some form of retention. This would obviously influence performance data in the short term.
- d) The interim payment scheme requires short term funding and this could also influence performance data in the short term.
- e) The nature of competitive bidding can be illustrated as a 'cobweb' situation, i.e. the firm is only aware of its success/failure after the event, and can then review its pricing strategy accordingly. Also, the firm may be forced to take contracts at reduced margins for reasons of activity. Overall,

this can lead to a 'swings and roundabouts' situation with regard to contribution per contract. Again, it was felt that a three year period would allow for this.

Table 2

Value of Output 1971-1984

£ million at 1975 prices
(percentage annual changes)

ACTUAL				
	1971	1972	1973	1974
Housing:				
Public	1594 (-8)	1424 (-11)	1387 (-3)	1345 (-3)
Private	2088 (+15)	2277 (+9)	2375 (+4)	1711 (-28)
Other:				
Public	3157 (-3)	3160 (nc)	3085 (-2)	2681 (-13)
Private	1496	1334	1218	1183
Industrial	(-4)	(-11)	(-9)	(-3)
Private	1578	1530	1563	1423
Commercial	(+9)	(-3)	(+2)	(-9)
<u>TOTAL NEW WORK</u>	9913 (+1)	9725 (-2)	9628 (-1)	8343 (-13)
<u>Repair and maintenance</u>	3352 (+1)	3678 (+10)	3861 (+5)	3761 (-3)
<u>TOTAL ALL WORK</u>	13265 (+1)	13403 (+1)	13489 (+1)	12104 (-10)

Source: Construction Forecasts 1982/3/4, Dec. 1981 Building & Civil Engineering Economic Development Council

Table 2 continued

£ million at 1975 prices
(percentage annual changes)

ACTUAL				
	1975	1976	1977	1978
Housing:				
Public	1482 (+10)	1640 (+11)	1491 (-9)	1402 (-6)
Private	1543 (-10)	1645 (+7)	1557 (-5)	1762 (+13)
Other:				
Public	2511 (-6)	2492 (-1)	2379 (-5)	2278 (-4)
Private	1174	1120	1298	1378
Industrial	(-1)	(-5)	(+16)	(+6)
Private	1291	1137	1136	1262
Commercial	(-9)	(-12)	(nc)	(+11)
<u>TOTAL NEW WORK</u>	8001 (-4)	8034 (nc)	7861 (-2)	8082 (+3)
<u>Repair and maintenance</u>	3417 (-9)	3214 (-6)	3328 (+4)	3855 (+16)
<u>TOTAL ALL WORK</u>	11418 (-6)	11248 (-1)	11189 (-1)	11937 (+7)

Table 2 continued

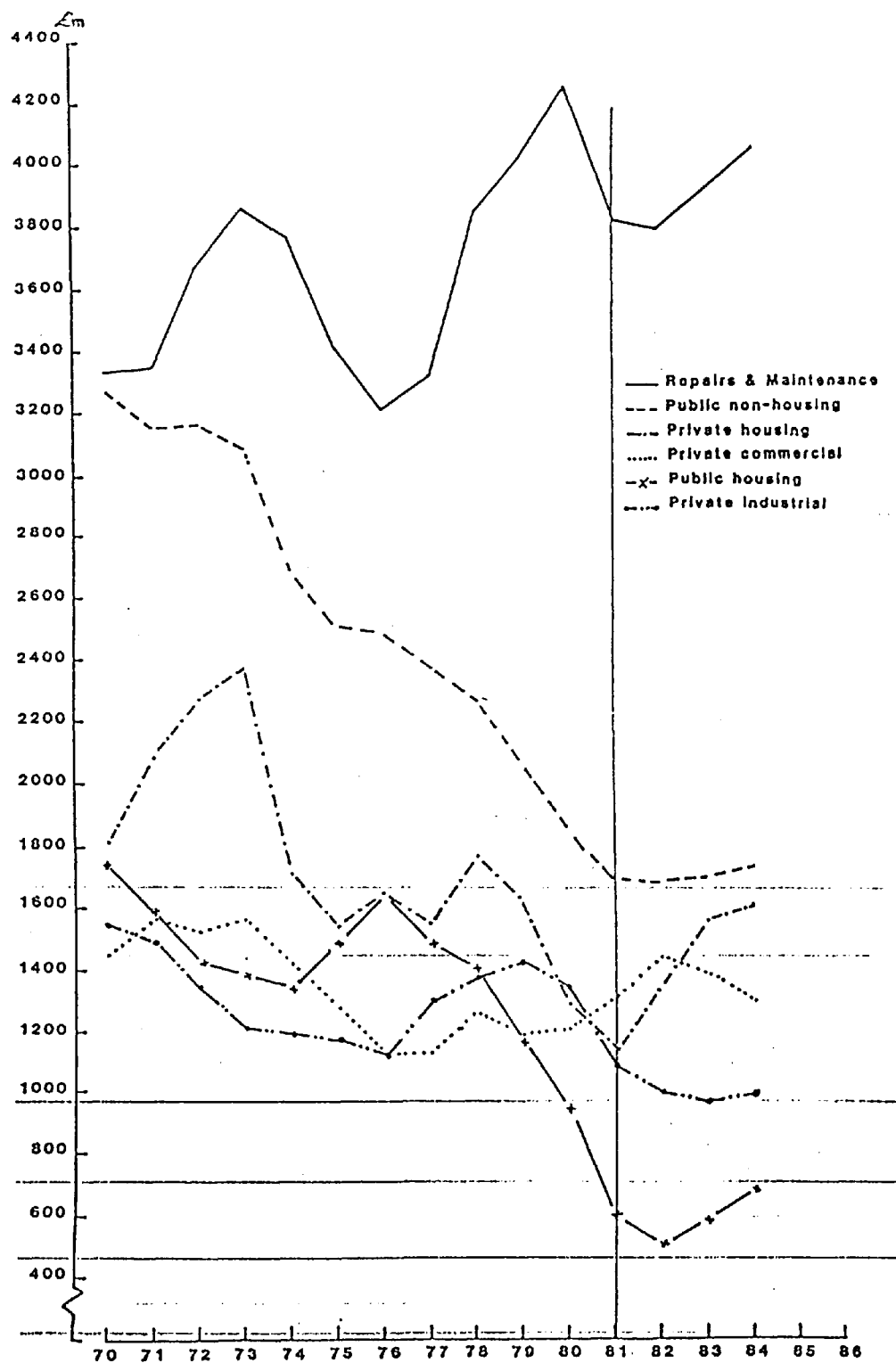
£ million at 1975 prices
(percentage annual changes)

	ACTUAL			FORECAST		
	1979	1980	1981	1982	1983	1984
Housing						
Public	1164 (-17)	953 (-18)	607 (-36)	505 (-17)	590 (+17)	685 (+16)
Private	1627 (-8)	1289 (-21)	1145 (-11)	1340 (+17)	1560 (+16)	1610 (+3)
Other:						
Public	2063 (-9)	1859 (-10)	1703 (-8)	1685 (-1)	1700 (+1)	1735 (+2)
Private						
Industrial	1426 (+3)	1339 (-6)	1074 (-20)	1000 (-7)	970 (-3)	990 (+2)
Private						
Commercial	1191 (-6)	1213 (+2)	1312 (+8)	1445 (+10)	1385 (-4)	1300 (-6)
<u>TOTAL NEW WORK</u>	7470 (-8)	6653 (-11)	5841 (-12)	5975 (+2)	6205 (+4)	6320 (+2)
<u>Repair and Maintenance</u>	4041 (+5)	4270 (+6)	3833 (-10)	3815 (nc)	3950 (+4)	4080 (+3)
<u>TOTAL ALL WORK</u>	11511 (-4)	10923 (-5)	9674 (-11)	9790 (+1)	10155 (+4)	10400 (+2)

N.B. On all tables of construction output, forecast figures have been rounded to the nearest £5 million.

Fig. 2

VALUE OF OUTPUT BY CONTRACTORS AND DIRECT LABOUR ON CONSTRUCTION WORK AT 1975 PRICES



Source: Opcit

3) Type of Company

To return to Fig. 1, the nature of the industry can be reflected in the five major groups involved:

- a) Materials manufacturers.
- b) Merchants/Distributors/Plant Hire.
- c) Sub-contractors.
- d) Main-contractors.
- e) Professionals.

This project is concerned with group d) exclusively. However, it is worth discussing the other groups to understand the way the industry operates.

Materials manufacturers. These can be divided into two groups, producers of natural materials e.g. building sand, gravel, etc., and manufacturers of building components, e.g. bricks, plastic pipes, wooden windows etc.

Merchants, etc. Builders' merchants are central to the industry and perform the accepted distributor's role. They are important because of the large number of local, small, general builders and sub-contractors of specialist services. Probably the largest merchants are U.B.M. Ltd., and Thomas Tilling (including the Graham Group), with turnovers in 1980 of £269m. and £1697m. respectively. Plant hire contractors are becoming increasingly important. For instance, in 1980 Hewden-Stuart Plant Ltd., turned over £110m. (Published Accounts).

Sub-contractors. Sub-contractors, accounting for some 35% of total value of output (Source: Housing & Construction Statistics H.M.S.O. 1985). In fact, a large proportion of a contract won by a Main Contractor is sub-let and often, the sub-contractor is the actual executor of the items in the bills of quantity.

The C.A.B.I.N. (1978) report commented as follows:

"Sub-contracting allows firms to develop expertise in specific trades and to provide a mobile service in specialist activities on successive construction sites. It also offers the main contractor a crucial method of adapting his workforce and resources to the fluctuating pattern of the workload".

Sub-contractors often have a very difficult marketing problem, i.e. the manufacturers persuade the Professionals to specify their products and the Main Contractor is then looking for the lowest price to supply and fix these products in line with the specification.

At a seminar at Liverpool Polytechnic (1980), the concensus of opinion was that specialist contractors would become more important in the 1980's primarily because of the influence of maintenance and replacement as opposed to new works. Sub-contractors would obtain a larger proportion of their turnover direct from the client and would probably be nominated, or specified on more occasions.

The Professionals

a) The Architect is normally employed on the basis of a fee scale method. The Architect is the agent for the client and is responsible for designing, specifying, appointing contractors, monitoring and vetting accounts. In 1977, the Monopolies and Mergers Commission found the present fee scale method, used by Architects, to operate against the public interest.

Often there is a problem of the very multiplicity of organisations involved and the relationships between them. As Sir Harold Emmerson (1962) said:

"...there is all too often a lack of confidence between architect and builder, amounting at its worst to distrust and mutual recrimination. Even at their best, relations are affected by an aloofness which cannot make for efficiency, and the building owner suffers. In no other important industry is the responsibility for design so far removed from the responsibility of production".

b) The Quantity Surveyor - seems to be peculiar to the U.K. and the Commonwealth. They are responsible for the production of the Bills of Quantities for submission to the Main Contractor to produce Tenders.

Their work includes consultation on plans and methods of construction, making preliminary estimates of cost, effects of modifications to the plans on costs and measuring work for certificates of payment.

c) The Engineer - In civil engineering work, the architect is replaced by the Civil Engineer who takes on the design/ specification duties. There appears to be a less compartmentalised state of affairs in civil engineering as compared with general building. Calvert (1981) feels this is due to, "...more freedom of movement of individuals to and from the professional and contracting sides, resulting in a tendency towards a more sympathetic attitude to the other man's point of view".

1.5. DEFINITIONS OF TERMS

The development of the sub-problems requires a clear understanding of the main terms to be used in the thesis and to this end it is valuable to define these terms as follows:

1) Marketing orientation

"Until the customer has derived final utility, there is no 'product', there are only 'raw materials'. And the 'marketing view', looks at the business as directed toward the satisfaction of a customer want and as a supplier of a customer utility". - Drucker (1961).

The conceptual difference between a marketing orientation and a non-marketing orientation is this goal of understanding customer needs, and providing goods and services to satisfy these needs, at a profit.

Marketing operations were one of the last phases of business management to develop into a core of theory. Kotler (1971) defines theory as,

"...an explicit and coherent system of variables and relationships with potential or actual empirical foundations, addressed to gaining understanding, prediction, or control of an area of phenomena".

Boyd and Massey (1972) suggest:

"Marketing is an area of business management in which it is very difficult to make precise decisions. The reasons for this lie in the omnibus nature of marketing, the difficulty of assessing the impact of variables present and the alternative ways of solving a marketing problem and the problem of estimating the effect of interactions between these variables, over time."

It is this very 'vagueness' of subject matter that has militated against its adoption in industrial marketing areas.

Aubrey Wilson (1973), of Industrial Market Research Ltd., commented:

"The initially slow acceptance of industrial marketing research by the medium and smaller firms reflected their hesitance in moving from the traditional product orientation towards the marketing concept, often a resistance to any change at all and a belief in the infallibility of the entrepreneur's nous".

Although the marketing orientation has been widely adopted by the consumer goods industries, particularly fast moving consumer goods, there still exists a general suspicion of 'marketing' and a feeling that it is synonymous with beguiling sales oration with little substance. For example,

"For the past 6,000 years, the field of marketing has been thought of as made up of fast buck artists, con-men, wheeler dealers and shoddy-goods distributors. Too many of us have been 'taken in' by the tout or con-man; and all of us at times have been prodded into buying all sorts of 'things' we really did not need, and which we found later on we did not even want". Farmer (1967)

This type of misconception has hampered the development of marketing, in general and more specifically, in the U.K. Construction Industry.

2) The Implementation of the Marketing Orientation

To be able to identify a marketing oriented company it is necessary to have a definition of how such a company is likely to be organised and function i.e. how the marketing orientation manifests itself through action.

Marketing is clearly a management function, Kotler (1972) defines it as:-

"...the analysis, planning, implementation, and control of programmes designed to bring about desired exchanges with target audiences for the purpose of personal or mutual gain. It relies heavily on the adaption and co-ordination of product, price, promotion and place for achieving effective response".

It is this 'mix' of product, price, promotion and place, that lies at the heart of marketing strategy. Each segment or target in the market place will need a different marketing mix to achieve the company's objectives.

Clearly, the development of a plan is necessary. Formal Marketing Planning has been defined by McDonald (1979) as:

"A management process which institutionalises procedures, leading to the explicit statement of objectives, strategies and programmes for marketing activities and the provision for the subsequent execution, review and control of such activities".

3) The Construction Industry

The Institute of Marketing, Construction Industry Group (1974), defines the Construction Industry as:

"That total industry which involves the utilisation of human, economic and natural resources in the conception, design, construction, maintenance, or demolition of buildings and civil engineering works".

The Standard Industrial Classification, Order XVII gives a much broader and more detailed definition as follows:

"Erecting and repairing buildings of all types. Constructing and repairing roads and bridges; erecting steel and reinforced structures, concrete, other civil engineering works such as laying sewers and gas mains, erecting overhead line-supports and aerial masts, open cast coal mining etc., the building and civil engineering establishments of Defence and other Government Departments are included. Establishments specialising in demolition work or in sections of construction work such as asphaltting, electric wiring, flooring, glazing, installing heating and ventilating apparatus, painting, plastering, plumbing, roofing. The hiring of contractors' plant and scaffolding are included".

This thesis is concerned with the Main Contractor segment i.e. those companies who deal either directly with the appointed professionals, or directly with the client to perform contracts involving constructing or repairing buildings and civil engineering structures of all types.

4) Measures of Performance

Bull (1969), sees performance in the following context:

"Most human activity is directed towards a particular objective or objectives, and the activity of business is no exception. To achieve a given objective requires two facets: firstly, the objective must be defined, and, secondly, measurements must be taken en route to the objective in order to ensure that it will eventually be obtained".

Performance then is the level of achievement of an individual or corporate body in the execution of tasks and endeavours, measured on some pre-defined scale.

In the context of this thesis, 'performance' will be used to compare companies and to draw inferences regarding the influence of 'marketing' activity. It is important to guard against a too

simplistic method of comparing company data. As Robert Erith (1984)

comments:

"...we fully appreciate that there are dangers involved in making direct comparisons between the operating statistics and ratios of individual companies. It is especially true when balance sheet items are involved as, for example, in the return on capital employed. Nevertheless, we feel that, used in the right way, the details shown can be of benefit, either for comparisons between firms, or for looking at the trend within individual companies".

The stockbrokers Savory Milln specialise in the analysis of the Construction Industry and their definitions are set out below:

CLASSIFICATION

Companies have been classified by reference to their principal activities within the construction, building materials and merchanting industries.

OPERATING STATISTICS

Sales/Turnover:-
Percentage Arising
Overseas

Sales of subsidiaries operating outside of the U.K. expressed as a percentage of group turnover.

U.K. Export Content

Exports, as disclosed under the Companies Act, expressed as a percentage of turnover arising in the U.K. Where total U.K. turnover is not disclosed, the actual value (in £000's) of exports shown.

Net Trading Profits	Profits arising from trading operations, after deducting depreciation, but before charging interest or crediting investment and other income. Whenever possible, exceptional items, such as currency and stock profits/losses, provisions for contingencies etc. have been excluded.
Net Rental Income	Rental income from investment properties, less maintenance and administration expenses, but before deducting interest on secured borrowings.
Tax Rate	Transfers to and from tax equalisation accounts are included in this comparison, but adjustments for previous years are excluded.
Earnings and Dividends per Share	These are calculated on the undiluted ordinary share capital, unless otherwise indicated, and the usual adjustments have been made for scrip and rights issues. Where the actual tax charge widely differs from 52%, a notional earnings figure has also been calculated using a 52% tax charge.

BALANCE SHEET AND
OTHER STATISTICS

Net Capital Employed

Net Fixed Assets plus Net Current Assets. However, cash investments and other assets not used in trading operations have been excluded from net capital employed, as have intangible assets such as goodwill. Overdrafts and other borrowings (including acceptance credits) have been excluded from the current liabilities. Net Capital Employed is calculated at the end of each relevant year.

Return on Net
Capital Employed

Net trading profits (as defined previously) expressed as a percentage of Net Capital Employed.

Ratio of Sales to Net
Capital Employed

This shows the number of times Net Capital Employed is turned over each year.

Stocks as a percentage
of Sales

Stock and work-in-progress at the end of each year expressed as a percentage of total sales.

Borrowings Ratio:-
Short Term (S/T)

Overdrafts and other borrowings repayable within 5 years expressed as a percentage of Shareholders' Funds and Minority Interests. Shareholders' Funds consist of the Issued Share Capital and Reserves, after making appropriate adjustments for the market value of quoted securities and after deducting any intangible assets.

Long Term (L/T)

Any borrowings repayable more than 5 years from the Balance Sheet date expressed as a percentage of Shareholders' Funds and Minority Interests.

Liquid Assets per Share

This is calculated by dividing cash and other liquid assets included in current assets by the number of Issued Ordinary Shares.

True Cash Flow

True Cash Flow consists of retained earnings, plus depreciation after making the following changes -

- a) Adjusting the share of associates' profits and minority interests to allow for the amounts received or paid out by way of dividends.

- b) Substituting tax paid during the year in place of the tax charge shown in the Profit and Loss Account.
- c) Allowing for dividends actually paid during the year.

Net Capital Expenditure

Total capital expenditure, less the book value of any disposals, but before deducting investment grants. Movements to fixed assets resulting from the acquisition or disposal of subsidiaries have been excluded.

Net Investment Property Value of Ordinary Shares

This is the value per share of Investment Property after deducting the appropriate secured borrowings.

Net Property Income per Share

This is the income per share after deducting interest on secured borrowings and notional corporation tax.

Number of Ordinary Shares in Issue

Where a company has more than one class of Ordinary Share Capital the different classes have been enumerated separately.

1.6 THE ASSUMPTIONS

The central assumption being made is one of 'ceteris paribus' - i.e. that other than the adoption of a marketing oriented strategy, all other things are equal.

This is clearly a potential weakness of the study. To minimise this weakness, several steps have been taken:

- Firms selected for the study operate in the general building/civil engineering segments of the industry. Firms who operate extensively in other segments have been omitted, e.g. Barretts Ltd. who are private house builders.
- Firms have been matched by level of turnover to allow for economies of scale and management organisation.
- A three year performance period has been chosen to minimise the effects of 'windfall' results

1.7 NEED FOR THE STUDY

The primary need for the study stems from the scale of the industry, and its relationship to the U.K. economy as a whole, and the reluctance of companies active in the contracting segment to adopt a marketing orientation.

Secondly, there is a core of empirical data developing regarding the relationship between certain key profit influencers and company performance.

There are several notable contributions to knowledge in this area -

- Thune and House (1970).
- Buzzell, Gale and Sultan (1975).
- Hooley, West and Lynch (1984).

These studies will be reviewed in detail in Chapter Three.

The research will therefore attempt to consider the findings of the above studies in the light of data collected from the U.K. Construction Industry.

Furthermore, it would be valuable to consider this research with regard to other industrial marketing industries in the U.K. or, foreign construction industries.

1.8 THE ORGANISATION OF THE REST OF THE THESIS

- Chapter Two - Industrial Marketing Theory - a review of current academic thought regarding industrial marketing.
- Chapter Three - Company performance and marketing activity - a review of research concerned with the relationship between company performance and 'marketing activity'.
- Chapter Four - Marketing in the U.K. Construction Industry - a review of the industry in terms of the nature of its markets and marketing practice.
- Chapter Five - Primary research methodology - a review of the development and execution of the primary research methodology.

Chapter Six - Presentation of the research results - the full presentation, description and interpretation of the research results.

Chapter Seven - Conclusions and recommendations - assessments of the results in terms of the hypothesis and recommendations.

CHAPTER TWO

INDUSTRIAL MARKETING THEORY

2.1. INTRODUCTION

This Chapter shall consider the core issues of Industrial Marketing theory. The objective is to establish a theoretical framework for the evaluation of good marketing practice. Given this objective, the review shall concentrate on selected, key references and will not be an exhaustive study of current writing.

Industrial marketing theory has been the poor relation in the development of marketing knowledge. Until quite recently, industrial marketing problems had been neglected by researchers, who concentrated on consumer marketing problems. Kotler (1972), suggests there are three major reasons:

- a) Marketing as a management function, has not been as highly developed in industrial goods companies, as in consumer goods companies.
- b) Where marketing departments had been created in industrial goods companies, they were all too often overshadowed by other departments.
- c) The often technical nature of the product/service, deterred research because it was felt that this technical complexity would require expertise not possessed by marketing academics.

However, it is wrong to assume that industrial marketing is essentially different from consumer marketing. As Kotler (1972), goes on to say:

"While product design, cost, and service do tend to loom larger in industrial marketing than advertising, promotion and merchandising, one must avoid blind spots with respect to the importance and creative use of all of the elements of the marketing mix in any marketing situation".

It is really a question of adapting marketing techniques to particular marketing problem areas. Industrial marketing differs from consumer marketing on two fundamental levels.

2.1.1. Differences in the buyers.

2.1.2. Differences in and the uses to which products and services are put.

2.1.1. Differences in buyers

As Webster (1979), points out:

"Industrial marketing is distinguished from consumer marketing more by the nature of the customer, than by the nature of the product".

There are four basic groups of industrial buyers:

- a) Industrial companies - manufacturing, processing, etc., who purchase to resell. This would include distributors.
- b) Original equipment manufacturers (O.E.M.) - who make equipment incorporating other companies' components and then sell them to a further group.
- c) Institutional, e.g. Universities, Nationalised Industries, Charities.
- d) Governmental, e.g. Health, Education, Defence, i.e. Local and Central Government.

The central difference between industrial purchasers and consumer purchasers is the motivation for the purchase. Companies and Institutions purchase to meet organisational purposes whereas consumers purchase to contribute to the well being of themselves or the family unit. Institutional and governmental buyers also have the further constraint of meeting the terms of public accountability. Governments may also have purchase objectives that are unrelated to their needs for the specific product/service, but are concerned with macro economics - i.e. using expenditure in the Construction Industry to reflate the economy.

There are several other factors which distinguish industrial and consumer buyers. Firstly, industrial markets normally face an oligopsonistic market, i.e. relatively few customers. This influences the strategies of such companies. Secondly, industrial markets tend to have a high unit value distinct from fast moving consumer goods (F.M.C.G.), but not always distinct from consumer durable markets. Thirdly, there tends to be a high degree of product complexity in industrial markets, and also, a high degree of purchasing complexity e.g. contractual conditions. Fourthly, the above features tend to develop a degree of interdependence between the buyer and seller. Lastly, industrial buying is notable for the existence of decision making units (D.M.U.) who sort and rank product offerings. There is a case for saying that some consumer durable purchases involve a D.M.U., e.g. husband, wife,

relatives, significant others, but such purchases are generally not as structured as company/institutional D.M.U.'s purchases.

The concept of the D.M.U. is very important in industrial marketing. As Webster (1979) comments:

"Buying decisions (industrial) do not just happen. They represent a complex set of activities engaged in by many members of the buying organisation and result in a commitment to purchase goods and services from a vendor".

The D.M.U. covers all those individuals who initiate, specify, control and purchase goods or services for their organisation. Brand (1972), discovered that responsibility for any stage of purchase is typically shared by more than three groups of specialists, with basic decisions being made by each group. Fisher (1976), also points out that there are formal and informal interactions between the members of the D.M.U. and external influencers. These interactions are illustrated in Fig. 3.

Fig. 3

Typical Elements in the Buying Structure

	Formal	Informal
Internal	Purchasing officer Executives directly affected Technical specialists	Operatives Secretaries
External	Consultants Government inspectorate consultants	Suppliers' reps. Customers Distributors Fellow members of technical organisations Public opinion

Reproduced from Fisher (1976).

2.1.1.1. Formal Interactions (Internal)

Most large companies have a well developed buying policy which institutionalises a logical approach to the problem. There are eight phases, as identified by Robinson, Faris and Wind (1967):

- i) Need recognition.
- ii) Definition of the characteristics and quantity of the item needed.
- iii) Development of specifications to guide procurement.
- iv) Search for and qualification of potential suppliers.
- v) Acquisition and analysis of proposals.
- vi) Evaluation of proposals and selection of supplies.
- vii) Selection of an order routine.
- viii) Performance feedback and evaluation.

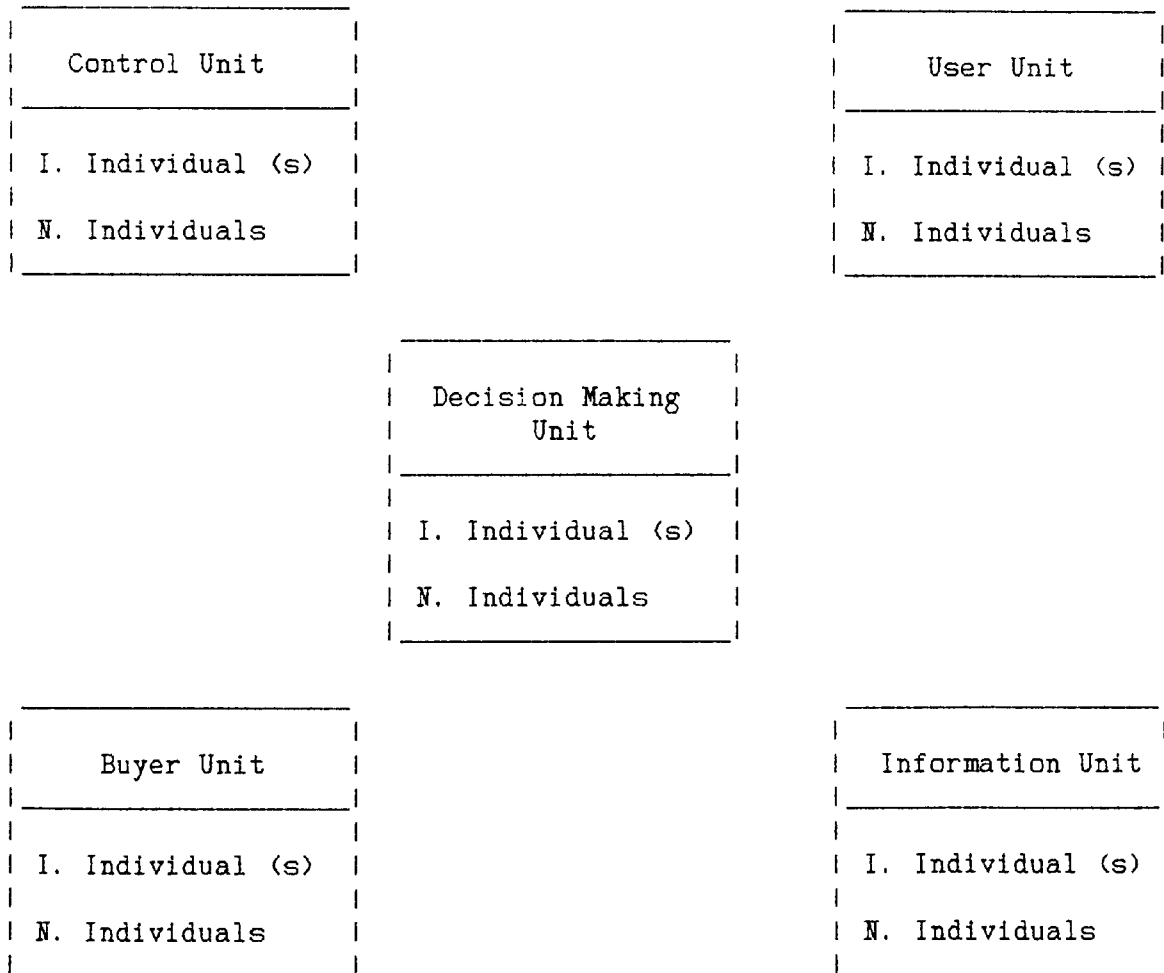
The above phases need not be in evidence in all buying situations. In fact, on-going, or 'Straight Rebuy', such as fuel oil, would display vii) and viii), and periodically vi). When the organisation changes its requirements or enters a 'Modified Rebuy' situation, it is possible that they would need to return to phase ii) or at least phase iii). In the case of a new need, or 'New Task', the organisation is likely to action each phase. Given this situation, a formalised method of operation develops, delegating the various phases to specialist/general management functions which may involve groups of individuals or simply individuals. For example, in the decision to buy a new press, the Production Manager (or User), the Works Engineer (or Influencer), the Managing Director (or Decider), and the Accountant (or Gatekeeper), would have input at various phases.

2.1.1.2. Informal Interactions (Internal)

Consideration of the structure of the D.M.U. suggests that for each of the major decision areas, different groups are involved. There is, therefore, a collection of groups which can be referred to as the 'buying centre'. Hill and Hillier (1977) presented this in the following Figure.

Fig. 4

Units in the Buying Centre



Source: Hill and Hillier (1977).

In essence, the four units set constraints on the decision to be made by the D.M.U. and act as 'informers' - producers of information, and 'controllers', at various stages of the buying process. The formal structure of the company will set individuals in a lateral and vertical relationship with other members of the organisation but as Hill and Hillier (op.cit) comment:

"...the nominal position or title of a person in a company does not necessarily indicate that person's actual function, influence or status, relative to other members of the organisation."

Fisher (1976), gives an anecdotal example of a dress manufacturing company which changed its supplier of threads and cottons. The new supplier's products met the same standards, but soon came in for criticism from machinists. Investigation showed that the previous supplier's representative had good relations with the machinists and ensured they had the correct settings on their machines. The new supplier did not maintain this contact, which led to incorrect settings and more frequent breakages and resultant lost production. To refer to the Figure, the machinists were members of the 'user unit', but in organisational terms, they were of low prestige in the decision process. However, their actual importance to the situation made them the salient members of the D.M.U.

There is a further, more profound impact of informal interactions on organisational buyer behaviour, - that of the human element. As Hill and Hillier (op.cit) say, all individuals are involved in 'Task' activities, i.e. those recognised by the organisation, such as source searching, and 'Non Task' or emotional activities such as:

- i. Ego enhancement.
- ii. Office politics.
- iii. Personal risk reduction.
- iv. Tactics of lateral relationships.
- v. Previous experience.
- vi. Other emotional activities.

At the first level, we are looking at the Personality of individuals in the D.M.U. Hellriegel and Slocum Jnr. (1976) see five areas in the development of personality:

- a. Hereditary - i.e. health and temperament.
- b. Group membership - influence of culture from 'Peer Groups' and 'Significant Others'.
- c. Role - development of role play on personal interactions.
- d. Situation - the influence on attitudes of chance events.
- e. Interdependence of influences - the above elements are inter-related and reinforce each other.

Human behaviour consists of actions which are directed at goals, be they conscious or unconscious, and are qualified by the personality of the individual. Wilson (1971), described three personality traits:

- a. The need for certainty - a concern for risk and a desire for definite knowledge.
- b. Generalised self confidence - the degree of correspondence between the individual's actual and ideal self concept.
- c. Need to achieve - the individual's commitment to perform well in any situation.

Wilson's (op.cit), research suggested that 'buyers' could be segmented on the basis of these traits into three broad groups, normative, conservative and switcher, e.g. the normative would see significantly less risk attached to high uncertainty than a conservative.

Therefore, the nature of the individual's personality can influence the way the D.M.U. functions. Pettigrew (1975) looked at decision making as a political process and concluded that ambition, competitiveness, status, security-seeking and power have a large bearing on the outcome of industrial purchasing decisions.

The next level is concerned with group behaviour.

Individuals form groups to achieve overtly similar goals. However, each individual brings their personality to the group and 'role plays' with the other members. The final

decision or decisions reached by the group are, therefore, a function of organisational structure and environment, and the role play of the individuals involved.

As McTavish and Maitland (1980), comment:

"A review of the work of various reseachers shows that economic factors alone cannot explain the sequence in which firms adopt innovations - 'Managerial attitude', probably accounts for as much as 50% of the variance in the sequence."

2.1.1.3. External Interactions (Formal)

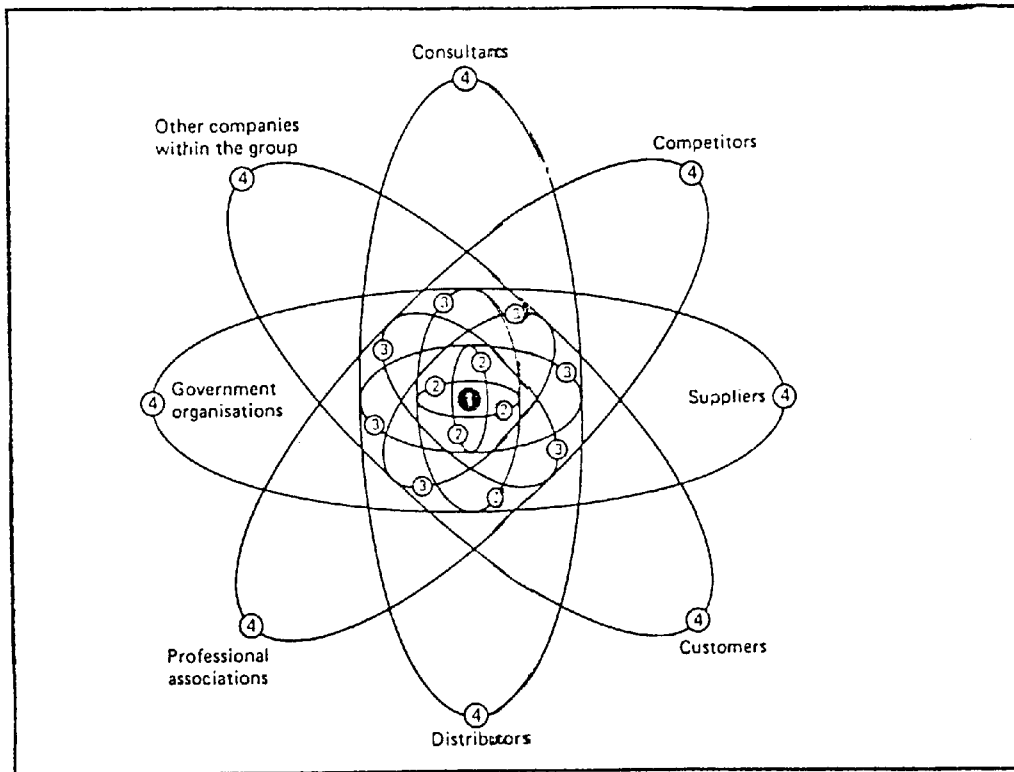
There are groups and organisations who, as Fisher (1976) puts it, "can exercise some sanction over the company". For example, the agencies who enforce legal obligations such as safety and pollution control. Such requirements set parameters within which the company must operate. These requirements can influence product selection.

Hill and Hillier (op.cit) have adopted a nuclear approach to studying the buying centre. This, encompasses formal and informal relationships. In Fig. 5 this "decision atom", is reproduced.

(1) is the actual D.M.U., (2) is the control unit within the company, (3) is the information unit within the company and (4) are those external influencers and controllers.

Fig. 5

THE DECISION ATOM : A NUCLEAR APPROACH TO THE
BUYING CENTRE



Reproduced from Hill & Hillier (1977)

2.1.1.4 External Interactions (Informal)

The importance of informal, external interactions must be noted. As mentioned above, an individual brings his attitudes and motives into the buying decision, and therefore, his relationship with his 'Peer Group' leaders and 'significant others'. Quite often, the views of customers and distributors impinge upon the preferences of the individual.

Also, public opinion can influence source selection such as attitudes held to corporate image.

Some writers on the subject of organisational buyer behaviour have used a model building approach to facilitate a better understanding of the problem. One of the best known is Webster and Wind's model, developed in 1972. They consider four sets of variables:

- a. Environmental : e.g. political, legal, cultural, technological, economic and physical, i.e. a macro influence.
- b. Organisational I : e.g. technology, structure, goals and tasks, and actors, i.e. these sub systems interact to determine organisational functioning and define for the individuals involved, the expectations and assumptions to be used in their decision making.
- c. Organisational II : they further sub divide this area into, communication, authority, status, rewards, and work flow, i.e. these influence the attitudes of the individual decision making and can be employed to advantage by marketing companies.
- d. Buying centre : this is concerned with the interpersonal relationships, which are influenced by individual goals, personality, group structure, group authority and the factors mentioned above. They state that the output of

the D.M.U. is not only a solution to the buying problem, but also contributes to the non-task goals of the individuals within the D.M.U.

To quote Webster (1979):

"Webster and Wind assert that in the final analysis, however, all organisational buying behaviour is individual behaviour in an organisational and interactional setting. Only individuals can define problems, decide and act. Furthermore, it follows that all buying behaviour is motivated by individual needs and desires, guided by individual perceptions and learning in complex interaction with organisational goals."

2.1.2. Differences in and uses to which products and services are put

Industrial buyers purchase, on the whole, different products from consumer buyers, but, more importantly, the purpose for which they purchase the goods and services is different. There are two areas which clarify this:

- a. Types of industrial products.
- b. The derived nature of the demand for the products.

a. Types of industrial products

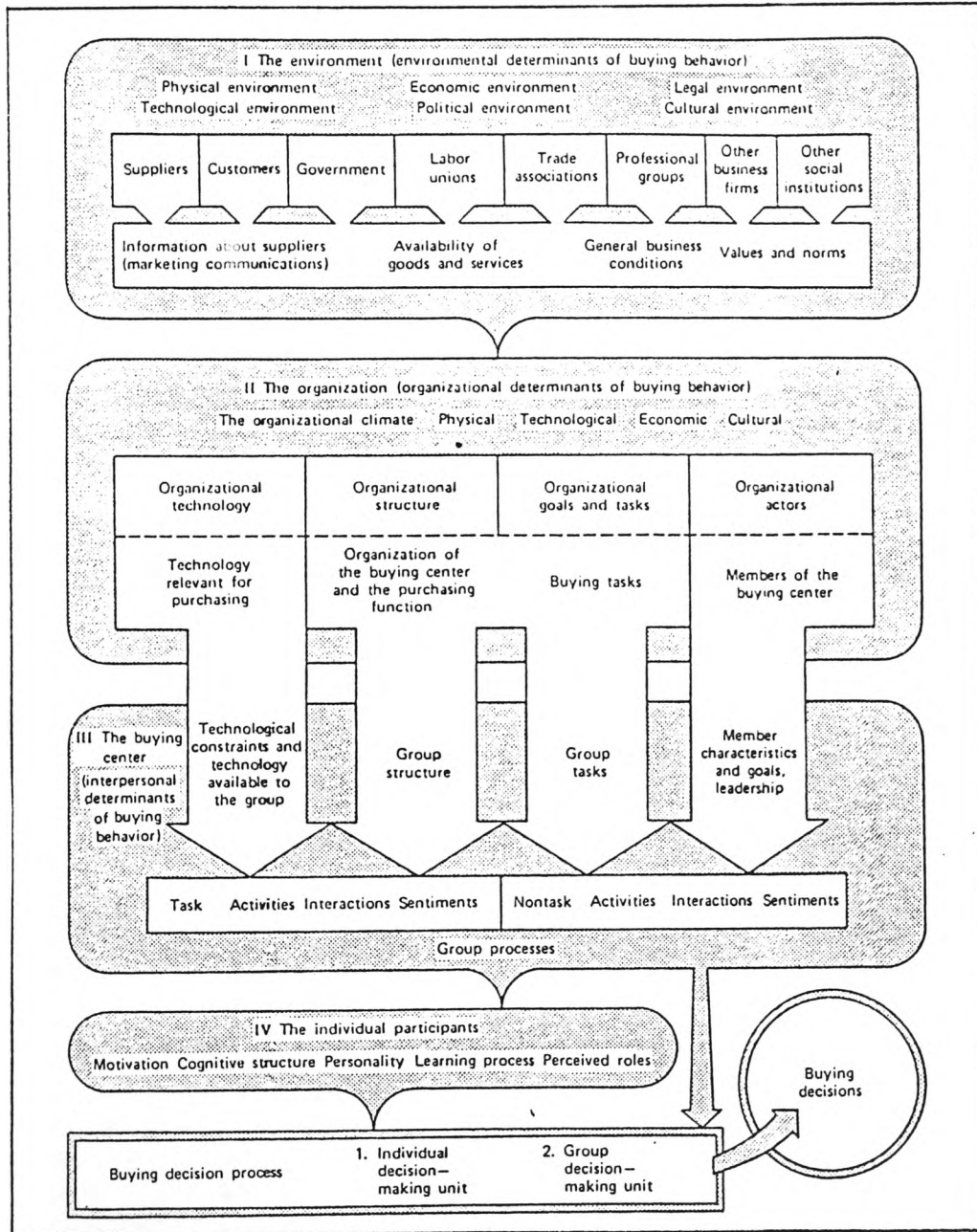
Hill and Hillier (1977) see three broad groups as follows:

- i) Products entering directly in manufacture - raw materials, semi-manufactured goods, parts to be installed or added to a further product, and contract manufacturing processes e.g., hot dip galvanising.

- ii) Suppliers of goods and services - maintenance and repair items, operating supplies, e.g., stationery and business services, e.g. printing, cleaning and equipment maintenance.
- iii) Capital investment items - installations, buildings, plant and non-fixed plant items such as vehicles.

Fig. 6

A General Model of Organisational Buying Behaviour



Reproduced from Webster (1977)

Original - F.E. Webster Jnr. and Y. Wind - A General Model of Organisational Buyer Behaviour: Journal of Marketing, 36, 2, - 1972.

b) The derived nature of the demand for products

As has been stated above, industrial purchasers do not buy goods and services for their own sake but as contributors to the activities of the firm. As Webster (op.cit) puts it:

"Demand for industrial goods and services is derived from the demand for consumer goods and services".

Derived demand is a function of various economic and social pressures, and, in the case of the public sector, political pressures as well. Moreover, because of the time lag involved in gearing manufacturing to new volumes or products, derived demand is controlled by companies' perceptions of future demands. To quote Webster again:

"It is probably more realistic to say that industrial customers' purchases reflect their 'expectations' about future demands for their goods and services."

Therefore it is the D.M.U's perception of future events and their subsequent translation into action. As McTavish and Maitland (1980), point out:

"The relationship between consumer spending and capital expenditure ultimately related to it is complex: for example, firms may invest when consumer demand is sluggish because they believe it will revive, or may undertake investment for its own sake, perhaps for strategic or competitive reasons. Thus derived relationships are merely broad tendencies. However, they still remain important in determining the demand for industrial products".

2.2. ASPECTS OF INDUSTRIAL MARKETING STRATEGY

The preceding sections have established the nature of the Industrial Marketing environment in terms of types of buyers and the use to which products are put.

To meet the objective of this Chapter it is necessary to look at the strategic issues of Industrial Marketing. This will provide a framework for classifying companies as "marketing oriented" or "non-marketing oriented". In this section, Industrial Marketing strategy will be reviewed by considering the following aspects:

2.2.1. Market segmentation.

2.2.2. Pricing.

2.2.3. Sales force management, (and buyer/seller relationships).

2.2.4. Promotional and communicative activity.

2.2.5. Marketing planning.

2.2.1. Market segmentation

Wind and Cardozo (1974), define a market segment as:

"...a group of present or potential customers with some common characteristic which is relevant in explaining (and predicting) their response to a supplier's marketing stimuli".

Consumer markets are often segmented on the basis of socio-economic and demographic criteria. The problem with industrial marketing is whether to segment individuals (i.e. each member of the D.M.U.) or organisations. Wind and Cardozo (1974)

suggest it is necessary to segment on the basis of type of organisation, type of buying centre and nature of the individuals within the D.M.U.

- i) Type of organisation - such factors as size, organisation, product end use, type of buying situation.
- ii) Type of buying centre - such factors as composition, relationships within, power source, group behaviour.
- iii) Nature of individuals within the D.M.U. - such factors as position in organisation, personality, attitudes, Peer Group affiliations.

Therefore, companies have a wide range of choice with regard to segmentation strategy. Some of the most widely used are:

- i) Geographical.
- ii) Industry e.g. by Standard Industrial Classification (S.I.C.).
- iii) Size.
- iv) End use of product.

Wind and Cardozo (op.cit), propose a two tier strategy of macro and micro segmentation, combining characteristics of both individuals and buying centres. Macro segments consist of organisations that are similar in terms of S.I.C., size, end use of product and geography. Micro segments are homogeneous groups of buyers within the macro segments, grouped on the basis of composition of the buying centre, individuals'

personality traits and degree of perceived risk, i.e. behavioural characteristics of the buying centre and its members.

2.2.2. Pricing

Pricing is often the most important tool in the industrial marketers' mix. This is probably due to the fact that marketing theory, as mentioned above, has not been as widely adopted as in consumer marketing fields. Also, third party specifying organisations, such as the British Standards Institution, produce specifications which are widely adopted, therefore bringing a certain homogeneity to the market place and resulting in little perceived differences in product offerings.

Industrial pricing, as McTavish and Maitland (op.cit), point out, is often different from consumer pricing. The latter tends to use price lists, whereas in the former, individual "quotations" are often prepared for each enquiry. McTavish and Maitland (op.cit), recognised four pricing objectives:

- i) Rapid cost recovery: i.e. related to short term cash flow problems and not necessarily consistent with medium term goods.
- ii) Market share improvement: i.e. volume. Often, a central objective is to increase volume, and prices are reduced accordingly. The aim is to achieve the lowest absorbed cost situation per unit.

- iii) Return on capital employed: often set as corporate targets and met by a variety of pricing strategies.
- iv) Penetration versus skimming: companies often set a high price with low volume to 'skim' the market. This can produce high short term revenue which can be used to promote the product with a new lower price to 'penetrate', i.e. go for market share. Often used in new product launch to exploit the benefits of R. & D. and then establish a firm market share against developing competition.

McTavish and Maitland (ibid) go on to say:

"Few industrial companies set their prices wholly on the basis of their costs, but there is widespread over emphasis on cost plus pricing....."

Cost plus pricing is the calculation of the total variable cost, absorption of overheads and addition for profit. It is unrelated to the market place and is an introverted act on behalf of the company.

Marketing points to the identification of clients' needs and the satisfaction of those needs; - this implies a perceived utility on behalf of the client. This would suggest value based pricing, but in practice, it is often difficult to adopt such pricing methods because of the problems of identifying a client's perception of 'value'

per product/service proposition. Webster (op.cit), makes the point that,

"Careful analysis of the impact of the purchased product on the customer's cost structure and revenue producing ability is called for in value based pricing".

2.2.3. Sales Force Management

"Industrial marketing strategies are characterised by their reliance on personal selling as a tool of communication, compared with consumer marketing's emphasis on advertising and sales promotion". Webster (1979).

There are three decision areas to be considered:

- i) The role of personal selling in the marketing mix.
 - ii) Management of the sales force.
 - iii) Allocation of the sales force.
-
- i) The salesperson is part of the company's problem-solving offering for the client, helping to define the buying situation, providing customer service and 'representing' the customers within their own firms. The salesperson is also central to the firm's communication strategy.

In a marketing oriented company, the salesperson will be concerned with the members of the D.M.U., and their relationships and attitudes, and will aim to make product presentations to those members, high-lighting the product's problem-solving capabilities relevant to their (i.e. D.M.U.'s) hierarchy of needs.

ii) Sales forces are normally organised on geographical, product, or market (or customer) lines. In some cases, all three are seen in one company. Management is normally organised on a 'span of control' basis relevant to the type of organisation employed e.g. regional manager, group product manager, Key Accounts manager. Brand and Suntook (1976) in a study of 301 companies found that 77% deployed their sales forces by geographical region, i.e. sales persons, regional sales managers, etc.

iii) The sales manager is concerned with achieving the best effect of his sales force by shifting effort from one account or territory to another based on how customers respond to sales effort.

It is interesting to note the low ratio of salespersons to total employment in industrial marketing companies in the U.K. Brand & Suntook (op.cit) found that half of the companies employing up to 500 people (from their sample) employed 1 - 5 representatives.

2.2.4 Promotional and communicative activity

There are four decision areas that are important in the development of an effective communications strategy.

- i) Target audience
- ii) Timing

iii) Medium/media

iv) Message

i) As illustrated earlier, the D.M.U. is a complex interaction of organisational and individual goal-seeking. However, it is often possible to generalise about the salient members, and they become the target audience e.g. architects in the specification of products in the construction industry.

ii) The industrial purchasing decision is characterised by its length. It is important to know when the client will need information at particular decision stages.

iii) As has already been mentioned, the most widely used medium is probably the salesman. Advertising also has a role, even though it can be difficult to ascertain which media reaches particular groups. In fact, the German magazine - Der Spiegel has attempted research to link readership and buyer behaviour data, (see Hill and Hillier, op.cit).

iv) The message developed by the firm must take into consideration task and non-task factors, and be geared to the needs and attitudes of the different groups in the buying centre.

2.2.5. Marketing planning

This aspect will be dealt with in Chapter Three.

2.3 SUMMARY

This Chapter has attempted to set out a theoretical framework for industrial marketing. The literature covered points to a number of particular areas that differentiate industrial marketing from consumer marketing. Probably the two most important being, differences in buyers and differences in which products and services are consumed.

There is a case for saying that a marketing oriented company, in an industrial market, should be aware of the nature of industrial buyer behaviour. Certainly, this is the manifestation of a consumer orientation in an industrial setting. Also, this marketing oriented company should demonstrate in its strategy, awareness of the core issues of industrial marketing; i.e.

- Marketing planning
- Segmentation
- Pricing
- Salesforce management
- Promotions

From this standpoint, the literature reviewed in this Chapter can provide the framework for classifying companies as 'marketing oriented' or 'non-marketing oriented'.

These features are:

1. Does the company operate a formal plan?
2. How long has the plan been in operation?
3. Does the marketing department have an influence on pricing?

4. Does the company use marketing research?
5. If so, what is the role of marketing research in the company?
6. Does the marketing department focus on the customer (i.e. the D.M.U.)?
7. Does the marketing department have an active role in the tendering process?
8. What are the objectives and tools used in the promotion of the company?
9. Does the company have a marketing department?

The above has been used to develop Part C., of the Field Questionnaire (see App. 2) and also to explore the likely responses to such questions from hypothetical 'marketers' and 'non-marketers', (see Fig. 7).

CHAPTER THREE

COMPANY PERFORMANCE AND MARKETING ACTIVITY

3.1. INTRODUCTION

This chapter is concerned with the research of others into the relationship between marketing strategy and company performance.

A central issue in the development of a marketing strategy is planning. Planning and strategy are closely related in the process of making the marketing concept operational.

Kotler (1972) says that the central objective of marketing planning is to allocate the firm's resources as effectively as possible. This allocation requires careful consideration of the firm's strengths, an assessment of the market place, definition of long term goals, identification of particular marketing opportunities, and the implementation of measurable programmes for exploiting these opportunities.

A key concept in this context is that of 'distinctive competence', i.e. "...that set of capabilities that translates into a product/market strategy, distinguishing the firm from its competitors in a way that is important to its customers". Webster (1979)

Whilst a firm will have a strength - a distinctive competence, it will also have weaknesses. Management needs to assess the environment and isolate segments that have a perceived need for the firm's distinctive advantage and where the firm's weaknesses can be minimised. This 'targeting' is a core activity of marketing planning.

Rhyne (1986) comments:

"Strategic management theory has held that the fundamental objective of organisation - wide planning is to achieve a 'match', 'fit' or 'alignment' between the external environment and the internal capabilities of an organisation".

Hitt and Ireland (1985) see performance linked to corporate distinctive competence i.e. those activities in which a firm does better relative to its competition - a strength. Their research into 185 companies drawn from the Fortune 1000 list suggested that corporate distinctive competences do exist and do influence performance.

Ringbakk (1968) suggested four features which have led to increased emphasis being placed on marketing planning:

- a) The shortening of product life-cycles, mainly because of technology.
- b) Increasing competition, including the development of third world capability.
- c) Technological change requiring careful planning and allocation of resources.
- d) The scale of investment necessary to make a project successful is so high that maximum information is required prior to decision making.

Gluck, Kaufmann and Walleck (1980) have postulated four phases in the evolution of strategic planning:-

1. Basic financial planning, seeking better operational control, aiming to meet budgets.

2. Forecast-based planning, seeking more effective planning for growth and trying to *predict* the future.
3. Externally oriented planning, seeking increased responsiveness to markets and competition, trying to think strategically.
4. Strategic management, seeking to manage all resources to create competitive advantage and trying to 'create the future'.

Bracker and Pearson (1986) identified eight components in the planning process:-

1. Objective setting.
2. Environment analysis.
3. S.W.O.T. analysis.
5. Financial projections.
6. Functional budgets.
7. Operating performance measures.
8. Control and corrective measures.

Planning then has evolved for a number of reasons and now can be identified in a firm in terms of a number of action oriented components.

Many studies have looked at the relationship between company performance and planning activity/marketing orientation. Reviewed here are those leading studies that are both relevant to this research and have also made a contribution to the understanding of the relationship between company performance and planning/marketing orientation.

3.2. THUNE AND HOUSE

Thune and House (1970), compared thirty six firms, in six industries (four of which were industrial marketing based), on the basis of formal and informal planning. They found:

"...comparing all formal versus informal planners during the above periods shows that the planners out-performed the informal planners on three of the five measures: earnings per share (44%), earnings on common equity (38%) and earnings on total capital employed (32%)".

The planners also improved company performance against an earlier period before the adoption of formal long-range planning into their firms. The authors did state that it would be wrong to see formal planning as the only variable in affecting company performance. It is extremely likely that firms who adopt formal planning will also use other analytical management practices. Long range formal planning then, is a characteristic of a well managed firm, performance comes from good management using appropriate tools - not the tool itself.

Thune and House adopted the following methodology. They identified 145 firms in nine industries with a turnover p.a. of not less than \$75m. A questionnaire was then sent to this group and 92 responses were received, (63%). Of this, 36 (25%) companies were "carefully selected".

The questionnaire was used to sort the sample into planners and non planners on the basis of their answers to questions concerning:

- 1) Did the company determine corporate strategy and goals for at least three years ahead?

ii) Did the company establish specific action programmes, projects and procedures for achieving the goals?

"Companies that did not meet these requirements were classified as informal planners".

The researchers adopted two approaches to the data.

- 1) The comparison of planners and non planners in the same industry over the same time period.
- 2) The comparison of planners for equal time periods before and after the institution of formal planning in their firm.

The authors used five economic measures:

- 1) Sales.
- 2) Stockprices.
- 3) Earnings per common share (ordinary shares).
- 4) Return on common equity (fully paid up ordinary shares).
- 5) Return on total capital employed.

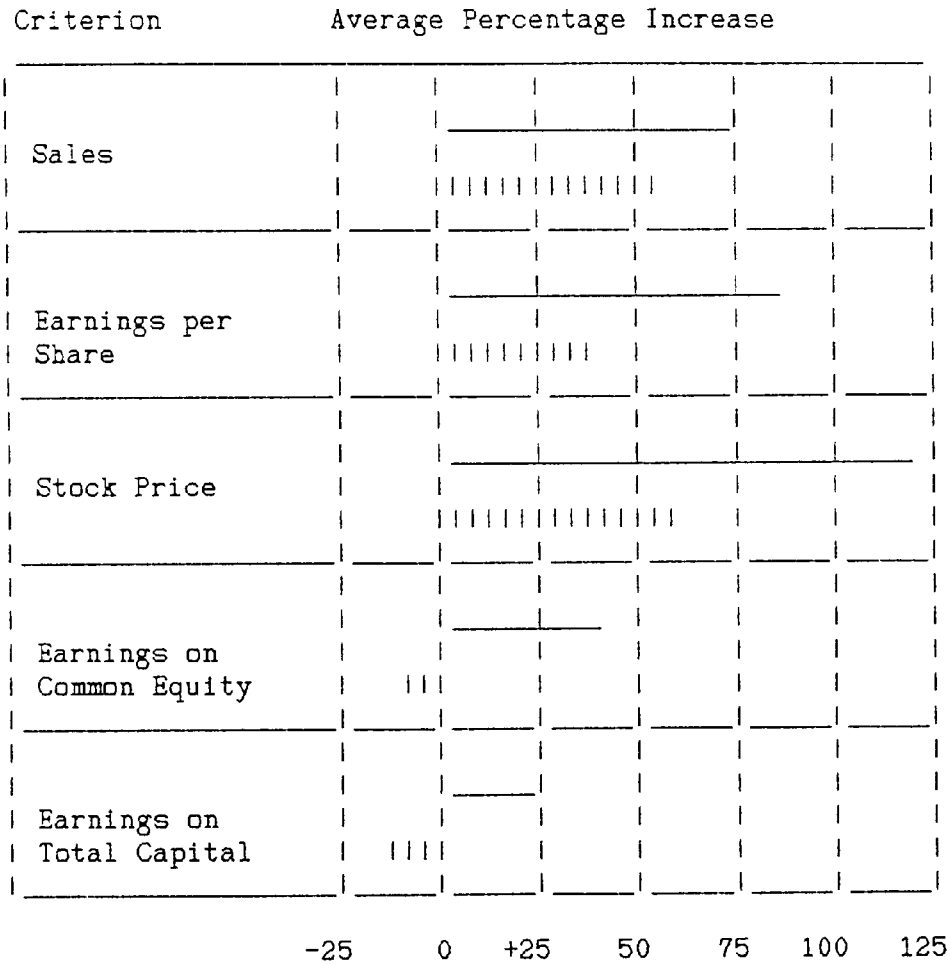
"Changes in accounting procedures were taken into account in the calculations and analysis".

"The statistical method used was a two way analysis of variance using industrial grouping and formal planners versus informal planners as the independent variables, and changes in sales, stock prices, earnings on total capital as the dependent variables. Five analyses of variance were computed, one for each measure of economic performance".

The results of their findings are presented in Tables 3 and 4.

Table 3

Performance of Formal and Informal Planners During Planning Period



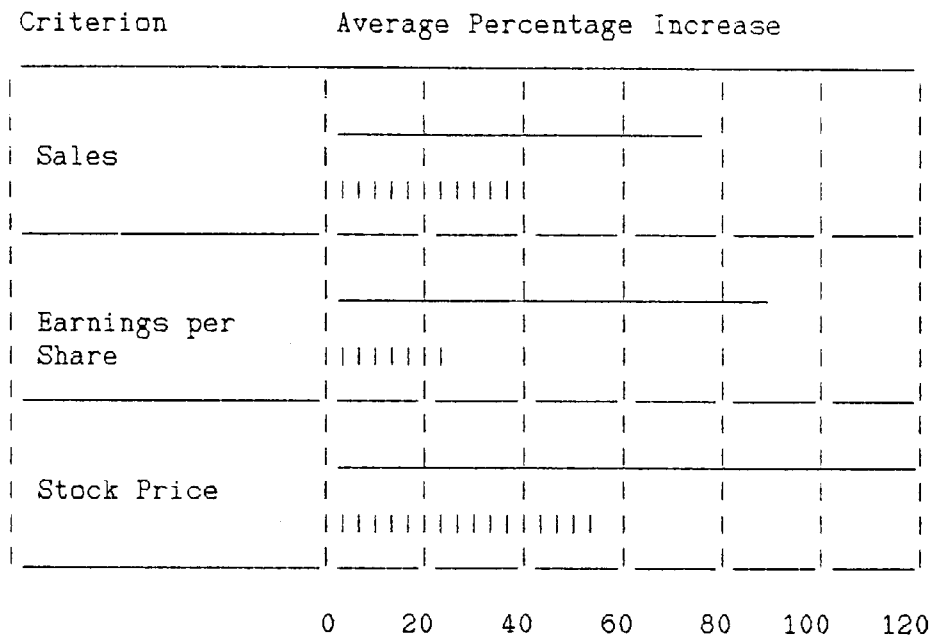
_____ Formal planners
 ||||| Informal planners

Source: Thune and House (1970)

The above table demonstrates that formal planners perform better than the informal planners on all measures. However, Thune & House state that on three measures (earnings on common equity, earnings on total capital and earnings per share) the formal planners significantly out-performed the other group.

Table 4

Performance of Companies Before and After Formal Planning



Source: Thune & House (1970)

This table demonstrates the improved performance after the adoption of formal planning, compared to an equal period before.

The authors did recognise that factors other than the adoption of formal planning had an influence on company performance. The factors would include generally superior management, an early product monopoly etc. To assess whether such factors did influence their findings the authors compared the informal planners with the formal planners for an equal time period before formal planning had been adopted.

"This comparison showed no significant difference between the two types of planners".

The conclusion being that formal planning was the major influence on the improved performance of the planners after the adoption.

Observations

1. The authors sample methodology is interesting. It would have been useful if they could have explained their criteria for "carefully selecting" the 36 companies they used in the study.
2. Their choice of turnover levels of \$75m+ means that the respondent characteristics are skewed towards the larger firm. This will obviously ensure that comparisons would have been on a more 'like for like' basis.
3. The critical part of the methodology concerns the splitting of the sample into planners and non planners (or formal and informal). It appears that this was done on the basis of the questionnaire. Whilst we have no details of the actual tool used there must be some cause for anxiety regarding spurious responses, i.e. a question asking a respondent whether he formally determined corporate goals for three years ahead may have caused a 'status bias' response. Consequently, non planners could have been classified as planners.
4. Herold (1972) tested the validity of Thune and House's classification of formal and informal planning. Tests using a new sample supported Thune and House's results. A number of other studies also supported Thune and House.
5. However, Grinyer and Norburn (1975) found no significant relationship between planning and financial performance. Rhyne (1986) comments that those who questioned the value of planning were more critical of the manner in which planning was actually carried out, rather than its value to management.

6. Although the authors do not state any definition of planning, it is evident from the text that they share the definition held by the body of literature on this subject.
7. The analysis does provide significant differences on a number of performance measures which must make the study an important contribution to knowledge.
8. Hussey (1984) summarised research in this area as follows:

"The general conclusion was that individual companies could do well without planning, but on average those who planned did better than those who did not".
9. The authors do make the following comment:

"Although the data made an impressive case for long range planning,, the results should be considered suggestive rather than conclusive. Because serious efforts were made to isolate critical variables by matching companies by size and industry, the sample was necessarily small and the matched groups were still less than perfectly matched".
10. Rhyne (1986) believes that Thune and House and the later researchers who adopted their approach, give insufficient attention to the extent to which corporate planning systems conform to theory. He concluded from his study:

"Firms with planning systems more closely resembling strategic management theory were found to exhibit superior long term financial performance both relative to their industry and in absolute terms".
11. Bracker & Pearson (1986) found that Thune and House's conclusions for large firms also held for smaller firms, (i.e. < 5m \$ turnover p.a.). They say:

"Firms that conformed to the structured strategic planning categorisation out-performed all other planning categorisations with regard to overall financial performance".

3.3. PIMS

Probably one of the most significant works in this area is the Profit Impact of Market Strategies (P.I.M.S.). The study is on-going and is a continuing analysis of the relationship between strategy, market conditions and company performance. The first two phases of the project identified 37 basic factors which explained 80% of the variation in profitability amongst the businesses studied. The researchers' main analytical tool is multiple regression analysis.

Schoeffler, Buzzell and Heany (1974), reported that six of the thirty seven factors were of particular importance, namely:

Market share i.e. the ratio of dollar sales, by a business, in a given time period, to total sales by all competitors in the same market.

Product (service) quality i.e. the quality of each participating company's offerings, appraised in terms of what was the percentage of sales of products from each business, in each year, which were superior to those of competitors. What was the percentage of equivalent products? Inferior products?

Marketing expenditures i.e. total costs for sales force, advertising sales promotion, marketing research and marketing administration, but not physical distribution.

Research and development costs i.e. total costs of product development and process improvement.

Investment Intensity i.e. ratio of total investment to sales.

Corporate Diversity i.e. an index which reflects the number of different four digit American S.I.C. industries in which the company operates, the percentage of total corporate employment in each industry and the degree of similarity or difference amongst the industries in which it operates.

The first three factors are clearly marketing areas and it is arguable that R. & D. and Corporate Diversity are related to the marketing overview via the planning process.

The P.I.M.S. data base comprises over 1,700 businesses, covering a five year period. The information consists of some one hundred items broken down into market, environment, competition, strategy and operating results.

The findings of the study point to the particular importance of market share on return on investment (R.O.I.), (i.e. pre tax operating income to average investment) as can be seen in Table 5.

Table 5

RELATIONSHIP OF MARKET SHARE TO PROFITABILITY

Market Share	Return on Investment
7%	9.6%
7 - 14%	12.0%
14 - 22%	13.5%
22 - 36%	17.9%
36+%	30.2%

Source: Schoeffler, Buzzell and Heany (1974)

Product quality has an influence on R.O.I. as can be seen below.

Table 6

EFFECT OF MARKET SHARE AND PRODUCT QUALITY ON R.O.I.

Market Share	Product Quality		
	Inferior	Average	Superior
12%	4.5%	10.4%	17.4%
12 - 26%	11.0%	18.1%	18.1%
26+%	19.5%	21.9%	28.3%

It is not surprising that superior quality and high market share should yield the highest R.O.I; but, it is ironic that a low market share/superior quality perform worse than, high market share/inferior quality.

High marketing expenditures damage profitability when product quality is low, as can be seen in Table 7.

Table 7

RATIO OF MARKETING EXPENDITURES TO SALES

Product Quality	Low 6%	Average 6 - 11%	High 11%
Inferior	15.4%	14.8%	2.7%
Average	17.8%	16.9%	14.2%
Superior	25.2%	25.5%	19.8%

Clearly, a company with an inferior product should commit investment to improving that product rather than running high marketing expenditures.

The underlying message from the P. I. M. S. study is that a company needs to plan for product quality and marketing expenditures to achieve high market share, and to invest in R. & D. to hold this share and facilitate corporate diversity.

Observations

1. The article by Schoeffler, Buzzell & Heany does not provide any information regarding methodology. In a later article, Buzzell, Gale & Sultan (1975) provided some information. Basically, the study takes in-house information from the participating companies. This is in the form of both objective and subjective data. The data regarding market size and growth are compiled on a very narrow basis i.e. for products within groups if necessary. Their dependent variable is Return on Investment - one of the measures used by Thune and House.
2. The findings do provide an insight into particular strategic marketing issues and performance; - most notably market share and product quality. This is, to a certain extent a more specific focus on marketing strategy and performance, than general planning.
3. Both papers cited above, and a later paper by Gale (1978) gives the distinct impression that the authors' objective in writing the articles was to "sell" P.I.M.S. to industrial sponsors. A leaflet obtained from the Strategic Planning Institute entitled "The P.I.M.S. Programme" (1980) gives in App. B a list of "products" on offer.
4. Despite Point 3, P.I.M.S. has provided benefits. Jane (1981) identified four benefits:
 - i) It provides a real and consistent method for establishing potential return levels.
 - ii) Stimulates managerial thinking.

- iii) Helps with strategic moves which will improve R.O.I.
 - iv) Encourages a more discerning appraisal of business unit performance.
5. P.I.M.S. does establish a data base to underpin the relationship between marketing planning, (as manifested by directed marketing activity) and company performance.
6. P.I.M.S. uses only R.O.I. as a measure of performance.

Chakravathy (1986) concluded from his study:

"No single profitability measure seems capable of discriminating excellence".

His reasons for this are as follows:-

- 1. Scope for accounting manipulation.
 - 2. Undervaluation of assets.
 - 3. Distortions due to depreciation policies.
 - 4. Differences in methods of consolidation of accounts.
 - 5. Differences due to lack of standardisation in international accounting conventions.
7. Wagner (1984) used the P.I.M.S. data base and arrived at the following conclusions:
- i. Only 9 factors (and 6 shifts) have a clear statistical association with R.O.I. improvements.
 - ii. Half of the variation in R.O.I. performance can be explained by the business cycle.
 - iii. Most businesses (60% of sample) do not change R.O.I. more than 10%, (over an 8 year period).
 - iv. "Winners" are characterised by cautious investment, high revenue growth and slow expenses growth.

- v. 35% of the sample had less than 1% change in market share over the period. If investment can be used to increase market share (grow revenue) it can have a marked effect on R.O.I.

3.4. McDonald

McDonald (1979), summarised research, by Cranfield School of Management, (into planning practices in U.K. companies), as follows:

- a) Most companies understand the importance of, and the need for, formalised marketing planning procedures.
- b) Only 15 percent (approx.) of the sample have such procedures.
- c) Companies do not institutionalise marketing planning procedures because they do not know how to design and introduce such procedures into their operational systems. To quote McDonald:

"....industrial goods companies do not comply with the theoretical framework of marketing planning and their approach to marketing planning is undisciplined, the process itself being poorly understood...."

This research was probably the first major research into planning practices in U.K. companies. In his Ph.D., McDonald (1982) went on to look at the theory and practice of marketing planning in U.K. industrial goods companies in International Markets.

The research methodology involved detailed case histories, and in-depth interviews with 385 directors and senior managers from 199 companies covering a broad spectrum of size and diversity.

McDonald's findings are particularly interesting:

- i) 90% of U.K. Industrial goods companies do not conform with the accepted academic model for marketing planning.
- ii) Those companies that did conform to the theoretical model enjoyed high levels of organisational effectiveness and a high degree of control over their environment.
- iii) The major benefit of marketing planning derives from the process itself, rather than the existence of a plan.
- iv) Planning requires intellectual input and time.

Observations

- i) McDonald does not feel that one can relate, causally, operational performance to the adoption of formal planning; this contradicts Thune & House (1970).

To quote the author:

"Even if it were possible to establish some universally applicable criteria of success and a relationship between these criteria and marketing planning practices, it would still be inappropriate to assume a casual relationship".

- ii) However, he does go on to say in his Recommendations section:

".... it was found that those companies that had mastered the problems of marketing planning were most effective organisations than those who had failed. It is most important that the lessons gleaned from such companies should be developed into theory".

3.5. HOOLEY, WEST AND LYNCH

The Hooley, West and Lynch (1984) study of marketing in the U.K. is probably the published research of most relevance to this thesis. The

study is recent, 1984; it is based on U.K companies and it is concerned with relating performance, (as it manifests itself in net profit), to management practices. The authors concluded that some companies had performed significantly better than others and that it was possible to identify certain key features which characterise high performers. To quote them:

"The features,, provide important guidelines for improved marketing effectiveness. The best companies and the most successful managers combine an unwavering commitment to classic marketing principles with a significantly heightened sensitivity and responsiveness to environment signals".

The authors refer to a "virtuous circle of best marketing practice", which is made up of four major elements:

- i) Genuine market orientation - the identification and satisfaction of customers' needs and wants.
- ii) Heightened environmental sensitivity - a commitment to monitoring, scanning and assessing changes in the market place.
- iii) Organisation flexibility and adaptability - the need to avoid over-rigid structure within the company and a mechanism for changing this structure in line with changes in the environment.
- iv) Increased marketing professionalism - a commitment to the recruitment of trained marketing professionals and the realisation of the benefits of on-going training.

Some notable results of the research are presented below:

Firstly, marketing orientation. Of those companies (59%) that were classified as marketing oriented, a significantly higher proportion (66.9%) of the high profit margin companies were classified so.

Table 8

Marketing Orientation of Company related to profit margin

Profit Margin

Marketing Approach of the Company	All Companies	Negative	Low	Average	High
1. Production Orientation	14.1%	23.0% (163)	16.5% (117)	10.1% (72)	10.3% (73)
2. Selling Orientation	26.0%	25.8% (99)	28.2% (108)	26.5% (102)	22.8% (88)
3. Marketing Orientation	59.9%	51.2% (85)	55.4% (92)	63.4% (106)	66.9% (112)
Number of Companies	1343	209	401	404	329
No reply	432				

Source: Hooley, West & Lynch (1984)

Secondly, marketing planning. This can be broken down into the extent of formal planning and awareness and usage level of strategic planning.

- 1) The extent of formal planning - There was a clear relationship between the extent of formal planning and profitability.

Table 9

The extent of Formal Marketing Planning related to profit margin

Profit Margin

The extent of Formal Marketing Planning in the Company	All Companies	Negative	Low	Average	High
1. Little or none	7.1%	8.1% (114)	9.6% (135)	4.2% (59)	7.1% (100)
2. Limited to Annual Budgeting	22.7%	26.3% (116)	25.7% (113)	23.2% (102)	16.0% (70)
3. A Separate Annual Marketing Plan	21.3%	22.0% (103)	24.2% (114)	19.8% (93)	19.1% (90)
4. An Annual Marketing Plan and Long Range Plan	49.0%	43.5% (89)	40.6% (83)	52.8% (108)	57.8% (118)
Number of Companies	1336	209	397	405	325
No Reply	439				

Source: op.cit

ii) Awareness and usage of formal planning

Table 10

Awareness and Usage Level of Strategic Planning
Tools Related to Profit Margin

Awareness and Usage Level	<u>Profit Margin</u>				
	All Companies	Negative	Low	Average	High
High	34.3%	32.9% (96)	27.7% (81)	40.7% (119)	35.5% (103)
Average	33.6%	30.0% (89)	38.8% (115)	28.8% (86)	35.5% (106)
Low	32.0%	37.1% (116)	33.5% (105)	30.5% (995)	29.0% (91)
Number of Companies	1386	213	412	423	338
No Reply	389				

Source: ibid

Again, there is evidence of the relationship between formal planning and performance.

"A higher level of usage and awareness of the techniques [i.e. of marketing planning] was associated with average or high profit margins and good relative performance while lower usage and awareness levels were more likely to be associated with losses, low profit margins and poor relative performance".

The results reported above have been selected for the relevance to this study. Hooley, West & Lynch's research did also look in detail at 'good practice' and performance.

The authors' methodology was as follows: using the subscription list of "Marketing" (33,000), the authors delimited the list to cover only senior management (12,744). They point out that the frame will be skewed towards the larger company and more than one respondent per company is likely. Following a pilot survey of 150 executives, [by postal questionnaire (response rate = 20%)]; the full mailed survey was despatched, (i.e. 12,744). Within four weeks, 1,775 (14%) replies had been received. Following this, 100 in-depth interviews were conducted using respondents and non-respondents, enabling some estimation of the direction of non-response bias.

The main data collection tool, the self completion questionnaire, was broken into three parts;

1. Company background.
2. The role and function of marketing in the organisation.
3. Current marketing practices.

The question structure included closed questions, open questions, attitudinal scaling and ranking questions.

Observations

1. In general the study appears to have been well planned and executed.
2. The nature of the sample frame does, however, suggest a bias to members of the Institute of Marketing. There is no evidence to suggest how representative this sample frame is of practising marketing executives in the U.K.

3. The response rate is also disappointing (i.e. 14%). Although the absolute number of responses is large enough to avoid problems of low cell counts in crosstabulation. The problem of non-response bias still remains. Whilst the in-depth stage of the study was designed to test for this, no details are provided in the report.
4. Nevertheless, this work has provided a frame work for this thesis.

3.6. HERBERT (1984) AND HARTLEY (1985)

A number of the researchers have referred to other factors affecting company performance. The above authors have considered these factors, as presented below:-

3.6.1 HERBERT (1984)

Herbert (1984) looked at success in performance terms of those companies short listed for the Business Enterprise Awards 1980-83. The methodology is very much case study based, using observation, visits and discussions with the management teams. He looked at these companies in terms of eight characteristics:

- i. Leadership - quality of the entrepreneur.
- ii. Authority - the need to give delegated responsibility enough autonomy to respond to the environment.
- iii. Control - the utilisation of appropriate tools of control.
- iv. Involvement - involvement of managers and workers at all levels.

- v. Market orientation - commitment of time, effort and resources to putting the marketing concept into practice.
- vi. Zero basing - the ability to conduct objective S.W.O.T. analysis.
- vii. Innovation - the essential creative element.
- viii. Integrity - a responsible approach to managing the firm.

Observations

i. The presence of planning and marketing orientation is clear in Herbert's work. What is interesting is the number of characteristics that are related to the personality/attitude of the senior management. As Thune and House (1970) suggest, planning (and marketing orientation to consider Hooley, West and Lynch 1984), is a manifestation of good management practice. The message seems to be, 'managers manage' and good managers use the appropriate tools which has a bearing on the performance of the firm.

3.6.2 HARTLEY (1985)

Hartley (1985) in his book "Marketing Successes, Historical to Present day: what we can learn", concluded that there are ten particular generalisations concerning marketing success.

- 1. Firms need a growth perspective and it is critical that executives manage growth effectively.

2. Innovation is important - not only in terms of new products but also in terms of new ways of marketing, e.g. distribution channels promotional tools, etc.

3. Imitation can prove to be a valuable method of improving performance.

"There are good arguments for identifying those aspects of successful competitors (even similar but non-competing firms), that contribute most to the success and to adopting them if compatible with the resources of the imitator".

4. Firms need to appreciate the dynamics of their market places - both in terms of changing needs/wants and changes in competitive performance.

5. The targeting concept in marketing is central to success. The better the firm matches its strengths to the perceived needs of the most appropriate segment, the more successful it is likely to be.

6. The firm needs to demonstrate a differential advantage over the competition in the minds of the target audience.

7. Customer satisfaction must always be the objective of executives.

8. Advertising, per se, is not enough to be successful. To quote Hartley:

"Certainly we have to conclude that high expenditures for advertising do not ensure success".

9. A firm must have a good relationship with its channels of distribution.

10. Marketing research is a useful tool in identifying target segments, assessing perceptions of differential advantages, etc.

Basically, Hartley concluded that good marketing was an attitude rather than a particular management tool. As the author says:

"The marketing concept with its consumer orientation was adhered to before the turn of the century by certain enlightened retailers who saw the need to maximise customer satisfaction".

Observations

i. It is interesting to note that Hartley sees the basic marketing concept - customer satisfaction as central to success. Herbert also identifies this issue, as does Hooley, West and Lynch (1984). It seems that strategic issues such as targeting, differential advantage and composition of the marketing mix, stem logically from this acceptance of a consumer orientation in successful firms.

3.7. SUMMARY

The studies considered above, point to a relationship between marketing activity (as it manifests itself in Planning, or a marketing orientation), and company performance. Having said this, it must be stressed that a marketing orientation seems to be a by-product of a good manager, i.e. acceptance of the importance of identifying and satisfying customer demands.

CHAPTER FOUR

MARKETING IN THE U.K. CONSTRUCTION INDUSTRY

4.1. INTRODUCTION

This Chapter reviews marketing in the U.K. Construction Industry.

This is done by examining the nature of the industry, (i.e. developing the work in Chapter One), and looking at marketing as it is currently practised in the industry.

4.2. THE NATURE OF THE INDUSTRY

Because of the special nature of the construction industry, there are five key areas that need to be considered:

- a) The economic characteristics of the industry.
- b) The client and his advisers.
- c) The placing of contracts.
- d) Trends in the industry.
- e) The Main Contractor.

a) The economic characteristics of the industry

Hillebrandt (1974), suggests that the industry has four special characteristics:

- i) The physical nature of the product and the method of production.
- ii) The structure of the industry including the relationship between the main groups in the industry and their interaction in the construction process.
- iii) The determinants of demand, why clients invest in building and construction work.

iv) The method of price determination i.e. tendering and competitive bidding.

The sheer size of the industry has a major impact on the economy. As Colclough (1965) comments,

"The very scale of the industry attracts the attention of political and economic planners and no sphere of activity is subject to such constant investigation and report.

The Government is a major customer and also influences private sector demand through interest rates. The 'multiplier' and 'accelerator' effects are particularly noticeable in the industry and their impact is heightened by the large unit value of projects. It was these factors that, in the fifties and sixties (1950's and 1960's) led to the 'stop - go' phrase being coined. Today, writers are still pointing to the political goals which often do not allow the attainment of the industry's goals, i.e. a 'smoothed' flow of demand.

Private sector demand for the industry's 'products', is complex. Firstly, the value of the 'product' tends to be high in relation to the client's income and utility must thus be derived over a long period of time. Such a purchase decision represents capital investment and must be tempered by interest rates, the entrepreneur's perception of future demand for his products, and the relative return from competing areas of investment.

Secondly, during times of high inflation property has been generally considered as an inflation proof investment. Thirdly, the 'client'

and the 'user' are often distinct e.g. a property developer is the construction industry's client but he will not be the user. Lastly, other than private housing, the demand for building is a 'derived' demand, based on other needs and wants of the client.

b) The client and his advisers

Dolan (1979),

"The largest single employer of the nation's construction industry is central government. Using its many departments and agencies as a guide and control, it dominates the economic viability of the building service and thereby exercises a decisive influence on both its progress and prosperity".

Government buys through central government departments, local government and nationalised industries. There are three other groups of clients that can be identified:

The commercial/industrial client - who purchases on the basis of derived demand e.g. industrial/OEM buyers.

The Property developer - who has, to some extent, a speculative role.

The Domestic client - the purchase of dwellings for owner occupation.

Within each group, there are varying degrees of knowledge and understanding of the building process. The Burt Report (1978) comments as follows:

"...some (clients) have only a vague idea of what they need and who can provide it, some have a precise idea of operational needs but are inexperienced in commissioning work, and some, such as local authorities, may have clear ideas and access to resources but are uncertain how best to deploy them".

The client, therefore, requires advice and guidance in using the industry. There are two major groups which provide this service.

- i) Royal Institute of British Architects (R.I.B.A.).
- ii) Royal Institution of Chartered Surveyors (R.I.C.S.).

In the majority of cases, both groups of advisers are involved. The architect is normally selected first and will, on occasion, recommend the quantity surveyor. Together, they will appraise the client's building requirements and establish a 'design brief' and alternative methods of satisfying this brief.

When the details of the scheme are finalised, the quantity surveyor prepares a full 'Bill of Quantities' (B.o.Q.). This is a translation of the designer's drawings and specifications into a measured description of the work to be undertaken. Following this, the contract documentation is drawn up, normally using a standard form of contract approved by the advisers, and tenders are prepared. Normally the architect, with aid from the client and quantity surveyor, will draw up a short list of contractors, and will interview these with the objective of selecting four or five, to whom the tender documents will be forwarded.

c) The placing of contracts

The construction industry shares, with many other industries, the competitive bidding or tender method of placing contracts. However, the nature of the construction industry's product, including

complexity and scale, and the importance of the specialist professionals in the pre-contract stage, has led to a development of several other methods of placing business, distinct from the simple tender system.

This topic has been of interest to authors in the industry for some time. The salient findings of Simon, (1948), Emmerson, (1962), Banwell, (1964) and Wood, (1975), can be compared:-

The Banwell report received much critical praise. Primarily, Banwell agreed with Simon, that letting contracts on a purely lowest cost basis, without considering value for money, was illogical. Tenders should be restricted to firms that are seen to be able and suitable to carry out the work, i.e. 'selective tendering' as opposed to 'open tendering'.

Banwell also felt that clients and professionals should be more receptive to alternative construction ideas from the contractors, at tender stage, instead of being dismissed as 'unfair' to the other bidders. In fact, the report went as far as suggesting that tendering competition can be further limited or even eliminated and other methods of placing contracts can be used. The report felt that such systems as Negotiated Contracts, could offer the client significant advantages and urged that the Public Sector should not dismiss such systems because of the need for 'public accountability', i.e. the belief that 'maximum' competition should produce the 'lowest' price and provide the best use of public funds.

Wood looked specifically at the Public client and the systems adopted. Wood's recommendations were particularly interesting. He felt that the client would benefit from the contractor's contribution at the design stage. Open competition was considered useless and should be discontinued. Probably, the most unexpected recommendations suggested the further adoption of other methods of placing contracts, such as Fee Scheme, Design and Build, Negotiated Contracts and Two Stage Contracts.

These four systems entail:

- i) Fee Scheme contracts: in this case, the contractor joins at design stage and helps with the design and costings preparation. He agrees a fee, perhaps related to the final cost of the project, with the client.
- ii) Design and build: here, the contractor offers a full service including that of the architect and quantity surveyor. Normally, the buildings tend to be simple constructions, e.g. factories.
- iii) Negotiated contracts: involve the negotiation of rates between a single contractor and the professional advisers. Usually adopted when time is critical or there is a long standing relationship between client and contractor.
- iv) Two stage contract: is a compromise between competition and individual negotiation. A number of selected contractors are invited to submit prices or pricing methods, on a competitive basis. A contractor is subsequently selected, and a detailed contract sum is then negotiated.

Davies (1983) reviewed the six major methods (i.e. Open Tender, Selective Tender, Fee Scheme Contracts, Design and Build, Negotiated Contracts and Two Stage Contracts) of placing business in the U.K. Construction Industry and investigated the perceptions of clients, professionals and contractors, to shares held by each system and trends in adoption of the systems. The results are presented in Tables 11 and 12.

Table 11

Percentage Share of Contracts let in U.K.,
per System, 1979.

	Client	Contractor	Professional
Open Tender	-	17.5	10.5
Selective Tender	87.0	44.0	76.0
Negotiation	4.8	8.8	7.0
Fee Scheme	5.9	4.0	1.0
Two Stage	0.5	40.0	1.2
Design and Build	1.8	21.7	4.3
	100.0	100.0	100.0

Table 12

Percentage Share of Contracts let in U.K.,
Per System - Prediction 1985*

	Contractor	Professional
Open Tender	7.3	10.3
Selective Tender	37.7	60.3
Negotiation	12.2	11.7
Fee Scheme	8.5	1.7
Two Stage	4.7	5.6
Design and Build	29.5	10.4
	100.0	100.0

* The clients were not asked to predict levels for 1985 because it was felt that their perceptions would really be based on information from their specialist advisers.

The contractors see systems other than open and selective tendering accounting for 55% of work let in 1985, but the professionals predict only 29%. However, the important point is that the "conservative" construction industry does expect to see a shift from selective tendering during the 1980's.

d) Trends in the Industry

J. Parry-Lewis (1965) analysed building trade cycles from 1700 and found distinct long term fluctuations, often regional, and suggests that the major independent variables controlling this cycle are population, credit and 'shocks', i.e. war, famine. Colclough (1965) links this cycle to the price of construction and says:

"...whether or not trade slumps are triggered off by a fall in the demand for building - in many cases attributable to excessive increases in the cost of building - the converse is certainly established that when depression has forced down building prices far enough, a recovery in the demand for building leads to an upward movement in trade generally.

e) The Main Contractor

The Main Contractor has a special relationship with the architect who is, effectively, the client's main agent. The success of the project depends, to a great extent, on this relationship. However, traditionally, there has been a poor relationship between the 'architects' and 'builders'; as Calvert (1981) puts it:

"This essential 'entente' is, unfortunately, sometimes weakened by the hypothetical distinction between the professional class and the rest, and by baseless suspicion born of mutual ignorance".

Dolan (1979) sees the main contractor being organised on the following lines:

- i) Construction Dept. - concerned with planning and execution of work load with particular emphasis on site work.
- ii) Surveying Dept. - responsible for surveying, measurement, valuations and input to the estimating function.

- iii) Purchasing Dept. - concerned with purchasing of materials, sub-contractors and hire of direct labour.
- iv) Accounting Dept. - functioning in a similar way to other industries on a cost and management basis and financial basis.

Consideration of the profit and loss accounts and balance sheets of the companies in Savory Milln's lists, give a good indication of how the main contractor operates:

Average Breakdown for Main Contractor

100%	Turnover:
70%	Sub-contractors and materials suppliers.
19%	Direct wages and salaries.
3%	Depreciation on plant and equipment.
3%	Taxation.
1%	Dividends.
4%	Retained profits.

The above reinforces the view that the Main Contractor acts as a co-ordinator of various sub-contractors in view of the large percentage of turnover accounted for by this group.

The industry has a large number of small companies and this is illustrated in Table 1. In 1984, firms with less than or equal to 34 employees accounted for 45% of industry output.

Economist Intelligence Unit (1978) commented:

"The construction industry has a characteristic skewed structure, combining a very large number of small, local businesses with comparatively few large, national and regional firms".

4.3. MARKETING PRACTICE IN THE U.K. CONSTRUCTION INDUSTRY

Marketing is now included in general texts on building management and Calvert (1981), is a good example. He sees 'marketing' in the construction industry as involved in the following areas:

- 1) Product - i.e. what type of construction - roads, private homes, etc.
- 2) Customer - i.e. Public sector, private house buyer, Corporate clients, consultants, speculators.
- 3) Distribution - i.e. geographical development of order book.
- 4) Price and Profit - i.e. analysis of historical data to identify most profitable segments.
- 5) Advertising and Promotion - i.e. mix of media and use of public relations consultants.

He suggests the main methods of obtaining business are:

- Speculation - e.g. private house building.
- Arrangement - e.g. on-going relationship with major client.
- Reputation - e.g. company image and past performance.
- Recommendation - e.g. by architect or client.
- Negotiation - identification of potential client with a construction project and the negotiation of a contract.

Tender - the completion of bills of quantity to be assessed,
normally, on the lowest cost basis.

Calvert, like many writers in this field, puts a heavy emphasis on
Public Relations, to:-

"....maintain and foster a company's reputation and, to put an
attractive image over to the public....".

Site housekeeping, press releases, articles in learned journals,
handing-over ceremonies, follow-up to ensure client satisfaction and
general good communication techniques are cited as those most commonly
adopted by contractors.

Marketing research is only considered to be relevant to forecasting
demand,

"....to discover whether the anticipated building pattern is
compatible with the company's resources, expertise and experience...."

Calvert (1981).

Jepson and Nicholson (1972) provided the first real attempt to discuss
marketing strategy in the context of the construction industry. They
commented on marketing's role as follows:

"The examination of alternative prospects and the consolidation of a
position within such markets entails the complete range of marketing
activity".

Translated into a tactical format, they see the central feature being
the development of relationships with prospective and existing clients
"Contacts have to be made and a service has to be sold".

They add a further role of 'intelligence' to that of forecasting for market research. By this they refer to such general trade information as when projects are to be let for tender.

The attraction of enquiries is the main objective of promotional work and they support Calvert's list of the major promotional tools applicable to the industry.

The Institute of Marketing Construction Industry Group (I.M.C.I.G.), (1974), produced a document which suggested methods of introducing the 'marketing concept' into construction companies. Basically, they advocated a Corporate Audit covering:

Management and Organisation: structure, abilities. Trading: analysis of completed projects, operating ratios. Markets and Marketing: market size, growth, segmentation. Technological Skills: human skills, research and development. Physical Resources: property, plant, stocks. Employment Practices: recruitment, remuneration, labour relations.

'Building', one of the leading periodicals in the industry, ran a series of articles describing marketing and recommending methods of applying marketing to the construction industry. Cochlin and Rix (1970) writing in 'Building', identified two major reasons for the lack of adoption of marketing. Firstly, the confusion that surrounded the concept and its implementation, and secondly, "...is the doubt that it (i.e. marketing) has much value to the general run of building operations".

Later, in the same series of articles, they suggested that the key to understanding marketing was to understand what are the functions of marketing, as distinct from other management functions, and what are the activities needed to fulfil these functions. They warn against executives thinking marketing is a synonym for sales:

"In terms of marketing, selling is activity designed to meet one or more of the functions (or ends, or objectives) of marketing. It is a means, not an end of marketing".

They recommend that contractors should consider the value of marketing in terms of:

- i) Identifying and assessing demand - they point to the lack of market research ability and its effect on management decisions -

"The history of system building is essentially a failure to really understand the psychology and complexity of the client - namely public authority architects, housing committees and the like. The industry seized on market's need for faster house building and wholly underestimated the client's reaction to both price and quality".

- ii) Obtaining demand - which encompasses promotional activity, development of contracts and efficient tendering systems.

The private house building segment has embraced marketing to a much greater extent than the industry as a whole. Population trends, mobility trends, the buying decision between husband and wife etc., are studied. Michael Wates, of Wates Ltd., a major private house builder, said in 1970, that his company had adopted a marketing orientation because of the large sums, and therefore risks, inherent in speculative house building.

Probably the most recent field research into the topic was carried out by Bell, for the Chartered Institute of Building, ("Marketing and the Larger Construction Firm", 1981). The objective of the research was to investigate the attitude of the organisation to marketing in construction industry companies. He used a structured interview format and a sample of eight contractors all with a turnover in excess of £10m. The results of the research are reproduced in App. 1.

Bell concluded that:

"Marketing as a concept is now well established within contractors' organisation, if not by the inclusion of actual personnel (as in the majority of cases) then at least by a recognition of the need for marketing activity".

But he does go on to say:

"...Marketing is an important part of the construction firm (even be it affected by each firm's individual factors), and there is room for much improvement in techniques and procedures".

4.4. SUMMARY

The consensus of opinion, therefore, of the writers reviewed above seems to be that the construction industry has commenced implementing the marketing concept, but has a long way to go. Russo (1981), writing about construction marketing in the United States said:

"Only a very small percentage of construction companies, in the single largest volume industry in the world, provide their services with any degree of marketing orientation. Of that small percentage, only a fraction are truly operating an effective marketing system. These companies, however, have proven to be fastest growing and most profitable".

It is worth considering this Chapter in the light of Chapter Two. The leading texts do not seem compatible with the body of theory developed in Chapter Two. The sources reviewed in this Chapter do not consider industrial buyer behaviour and the effect of the D.M.U. as important concepts. Only Cochlin & Rix's (1970) reference to the need to understand, ".....the psychology and complexity of the client" demonstrate any acceptance of these core concepts.

Furthermore, Bell (1970), (whose research is the most specific and recent), did not consider industrial buyer behaviour worth including in his questionnaire, (see App. 1).

Clearly, the U.K. construction industry is a long way from the theoretical framework set out in Chapter Two.

CHAPTER FIVE

PRIMARY RESEARCH METHODOLOGY

5.1 INTRODUCTION

The hypothesis developed in Chapter One can be paraphrased as follows:

- Companies who adopt formally developed marketing strategies will perform better, in economic terms, than companies who do not adopt such strategies.

This hypothesis is intuitively acceptable - if a firm understands it's customers and provides them with goods and services they want, this firm should perform well. The research reviewed in Chapter Three provides empirical evidence to support this view.

The purpose of the research is thus to test this hypothesis.

Consideration of earlier research, particularly Thune and House (1970), McDonald (1982) and Hooley, West and Lynch (1984) indicated that the methodology would need to:

- Ensure that the sample frame was adequate.
- Assess performance over a period of years rather than a 'spot' year.
- Recognise the impact of non-marketing factors on company performance. Many factors impinge on a company's performance such as scale, quality of management, labour productivity and others. However, "marketing" must be one of the most important factors influencing company performance. As Herbert (1984) comments:

"It will be apparent by now that the perceived importance of attending to the market place is bound up, integrally, with many if not all of our other ingredients for success. Indeed, that fact tempts one to speculate on whether marketing is not, after all, the lynchpin of business enterprise".

- There appeared to be five steps in planning the research:
 - i. The establishment of what types of data would be needed.
 - ii. The selection of appropriate analytical tools.
 - iii. The sample frame and sampling method.
 - iv. The method of splitting the sample into two groups - i.e. "marketers" and "non-marketers".
 - v. The method of data collection.

At the early stage of the research several different strategies were considered, most notably the observation case study approach. This was rejected because of problems of size of sample i.e. the anticipation of not being able to observe more than six companies and the consequent difficulties of testing the hypothesis. The strategy adopted is set out in 5.2.

5.2 RESEARCH STRATEGY

There were two distinct sets of variables that would form part of the data. The dependent variables i.e. the performance indicators,

Sales growth
Net profit to sales
Return on capital employed
Earnings per share

which were available from published accounts.

Several researchers have pointed to the fact that such measures are not the only way one can evaluate company performance. Thompson (1967) refers to 'a firm's fitness to engage in future activity' as the most appropriate effectiveness measure. Chakravarthy (1986) suggested five levels of measurement:-

1. Profitability measures.
2. Market to book ratios - i.e. computing the financial market's estimation of the firm's potential for performance in the future.
3. Composite measures e.g. bankruptcy model (Altman 1971; Argenti 1976).
4. Multiple stakeholders - i.e. satisfying a range of interests.
5. Measures of ability to transform to meet future challenges.

However, Woo and Willard (1983) state:

"Despite the problems inherent in R.O.I. (Return on Investment), results from this study would support the continued use of this measure. The profitability factor demonstrated the highest factor magnitude of the second factor, relative market position (which explained 10.7% of the variance)... When properly complemented by other measures, this study shows that R.O.I. is essential to the comprehensive representation of performance".

The independent variables i.e. those factors that influence the dependent variables. In essence, it was necessary to dichotomise the sample into 'marketers' and 'non-marketers', to enable tests of performance. This area caused many problems. The first solution was to develop a questionnaire to be mailed to the respondent companies which would enable the companies to be classified on the basis of their responses. This strategy was based heavily on Thune and House (1970) in terms of technique.

The exercise took the form of a mailed, self completion questionnaire to the largest 89 companies in the U.K. Construction Industry, (drawn from "Contract Journal", July 1983).

The questionnaire is presented in App. 2. Section C, particularly, contained questions designed to enable the placing of respondents into either group.

The questionnaire was mailed out on the 1st February, 1984 and a follow-up letter was sent one month later, (see App. 3 and App. 4 respectively).

The results were particularly disappointing -

Table 13

Results of First Questionnaire Mailing

	<u>No.</u>	<u>%</u>
Total sample size	89	100
Completed questionnaires	9	10
Refusals (written)	24	27
"Gone away"	3	4
No response	53	59

An alternative method of collecting independent data based on peer group evaluations was then adopted. Dependent data, in directly comparable format, was available from Savory Milln, (stockbrokers) who produce their 'Building Book', annually. The problem was to develop some method of sorting the sample companies on the basis of their adoption of the marketing orientation.

A shortened list taken from the original 89 companies was developed and a ranking scheme devised, based on an unbalanced itemised scale. A list of five industry experts was compiled and a covering letter and "check list" was forwarded to them during July 1985. Four responses were received and these were used to set up a pilot analysis, the results of which are presented in App. 5. Although the results were inconclusive the pilot provided useful information in developing the next stage.

Most importantly, there was a clear need for a bigger group of expert opinion who could assess the marketing activity of the sample companies, and rank accordingly. This group was available through the Institute of Marketing's Construction Industry Group.

Discussions with the Institute began in August 1985 and in October agreement was reached to their members being approached in connection with the research. The 'C.I.' Group has some 500 members drawn from marketing posts in the Industry and related fields, forming an ideal panel of judges. In November, 1985, 500 sets of questionnaires, covering letters and Freepost envelopes were forwarded to the Institute. In February, 1986 these were distributed to the Construction Industry Group.

Up to the end of March, 1986 the following position emerged:

	No.	%
Sample (Nominal)	500	100
Completed questionnaires	142	28
"Gone away"	-	-
No response	358	72

Of the completed questionnaires, 110 were useable for analytical purposes.

i) The establishment of what types of data would be needed

There were two distinct sets of data needed - dependent and independent.

The dependent data can be described as accounting records of aspects of individual company performance. The main indicators, were:

- Sales growth i.e. percentage change over the period.
- Net profit to sales i.e. net profit expressed as a percentage of sales.
- Return on capital employed i.e. net profit expressed as a percentage of net capital employed.
- Earnings per share i.e. calculated on the diluted ordinary share capital after the usual adjustments for scrip and rights issues.

There were two problems inherent in dealing with the dependent data. Firstly, it was necessary to obtain clear and distinct definitions of the terms involved in the data required.

Secondly, it was necessary to ensure that, as far as possible, performance ratios for different companies would be broadly comparable.

Both problems were resolved by using Savory Milln's calculations, published annually in their "Building Books". In these publications the terms are clearly defined (see Chapter One for full definitions), and the results of the companies under review are adjusted by the authors to allow direct comparison.

One further detail must be mentioned - that of accounting year end differences. The majority of the 38 companies have a 31st December, year end, (i.e. 34), and it was felt that the problems of comparing slightly differing time periods would be minimised by the use of a three year period of investigation.

The independent data gave rise to a wholly different group of problems. The objective was to establish some consistent method of sorting the sample into marketing oriented and non-marketing oriented companies. Clearly, the operative word is "consistent". The review of current literature in Chapter Two, developed a basic approach to the management of industrial marketing strategy. Moreover, the work of Hooley, West and Lynch (1984) actually related "a good marketing practice" with company performance.

During the pilot in-depth qualitative interviews conducted during July, 1983, an insight was developed into how the two groups would

differ in their view of particular marketing concepts. This, and the material in Chapter Two, has been developed into two sets of hypothetical answers to questions concerning marketing from marketing oriented and non-marketing oriented companies, (see Fig. 7).

The marketers represent an 'ideal type' of marketing oriented construction company - adapting general industrial marketing concepts and practices to the construction industry. It is fair to say that the two hypothetical respondents represent poles and in reality, firms will fall between such poles. The answers for the 'marketers' have been drawn from the theoretical framework set out in Chapter Two.

Probably the clear difference between the two hypothetical cases is that the marketing oriented company has a strategic view, whereas the non-marketing oriented company has a more tactical view.

From this work, Section C of the first questionnaire was developed, (see App 2). However, as was stated above, the response to the questionnaire was extremely disappointing. The problem of developing a consistent method of setting the independent variables remained.

Fig. 7

Hypothetical 'Answers' To Questions Concerning Marketing Activity
From 'Marketing' and 'Non-Marketing' Respondents

Topic	'Marketer's' Answer	'Non-Marketer's' Answer
Formal Marketing Planning	Central to main board, reviewed regularly, formalised, translated into strategies & tactics.	Main board uses its experience in construction industry and does not need to go to such formal, even 'academic' lengths.
Market Research	Regular desk research, computer based forecasting models, use of Nedo, etc., regular formal review of information from contacts. Use of field research - ad hoc - use of agencies.	We get most of our research information from our contacts and we use 'gut feelings' to interpret and plan.
Relevance of Marketing to firm	It is starting point - identification of client's needs, use of segmentation, understanding client's, agents and relevant interactions. Aiming at maximum return on effort.	Helps us to forecast, image building etc., not central to business - estimating, bidding and getting on with the job. Profit is made on site!
Future Relevance	Marketing is in infancy in industry, work on org. buyer behaviour will improve effectiveness of strategies. Will be central to business planning and resource allocation	No Comment
Goals of sales people	Analysis of D.M.U. and org. B.B. Regular update of goals set to attitudinal movement of various members of D.M.U. per re-buy, modified re-buy, new buy. Develop data-on competitor pricing.	To make contacts and develop relationships to 'oil' wheels i.e. ensure we get opportunity to quote.

Fig.7 continued

Topic	'Marketer's' Answer	'Non-Marketer's' Answer
Individuals involved in marketing/selling.	Main board, regional managers, M.R. staff, advertising, mkt. services (stats.), reps., negotiators, bidding specialists, P.R. manager.	Main board (perhaps), regional staff - mainly contract oriented. Some stats./forecasting and publicity.
Relationship between marketing and pricing	Data on market ruling prices, competitive bidding situation, opportunities to negotiate, use non price features. Final say in quoted price.	No relationship marketing's role is to get opportunity to quote.
Advertising	Relevant to strategies and segments, effort expended on media and message effectiveness. High degree of monitoring.	Very small amount - image building e.g. contracts completed.
Other promotional areas	Logo/notepaper, company colour scheme, site hoarding, exhibitions, seminars, promotional gifts	
Public Relations	Very important - use of trade/nat. press, prof. bodies, T.V./radio etc. to promote image without 'bias' of advertising.	We tell 'Contracts News' when we win a prestigious job.

The solution to this problem was the use of peer group evaluations, of the status (i.e. 'marketing' or 'non-marketing'), of the sample companies. Again, the problem of consistency emerged. It was necessary to ensure that all the judges would be applying the same 'test' to the companies. The only simple way to do this was considered to be the use of a broadly acceptable definition of marketing that encompassed the strategic aspects considered to be important in assessing a company's marketing practice.

Question E in the main field questionnaire (see App. 6) provided the respondents (judges) with the "Institute of Marketing, Construction Industry Group's" definition of marketing in the context of the U.K. Construction Industry. It also encapsulates the strategic aspects of marketing, namely:

- Targeting.
- Assessment of customer needs.
- Integrated marketing mix.
- and Profit orientation.

Of the total responses to this question 81.5% agreed with this definition. Of the 13% that did not agree, none offered an alternative definition.

This then provided a consistent foundation from which the judges could consider the sample companies and rank them in terms of their adoption of the marketing orientation.

ii) The selection of appropriate analytical tools

The information needs of the research, having been translated into types of data, required appropriate manipulation to address these needs. The sample of companies to form the core of the study was drawn on a judgement basis. This, therefore, invalidated the parametric tests for relationship, such as linear regression and multiple regression. Non-parametric tests would be needed to explore for relationship between 'marketers' and performance and 'non-marketers' and performance.

The hypothesis states that the adoption of a marketing orientation will lead to improved performance. Implicit in this statement is that a positive correlation will exist between these two variables. The majority of correlation tools are based on quantitative data. However, this study would generate qualitative data i.e. marketing oriented/non-marketing oriented. The most appropriate tool to test for relationship in this context is the Contingency Coefficient.

The Contingency Coefficient (C) uses the Chi square values generated from a table that has equal columns and rows. Contingency Coefficients are in many ways similar to ordinary correlation coefficients - i.e. close to 0 = no correlation, close to 1 = a strong relationship. In fact, for 2 x 2 matrices the 'perfect' correlation would yield $C = .707$.

The significance of C is based on the number of degrees of freedom calculated by the following - $(R-1)(K-1)$; where R = number of rows, K = number of columns. Therefore, in a 2 x 2 matrix there is one degree of freedom.

The hypothesis also suggests that the samples, once classified will represent different populations. Also, that the average performance of the marketing oriented group will be higher than that of the non-marketing oriented group.

The most appropriate test for this is KILMOGOROV-SMIRNOV two sample test. The one tailed test to explore the relative sizes of the means of the sub groups on each performance measure, and the two tailed to assess if the sub group samples were drawn from different populations. A significant result suggests that some characteristic of the distributions is different - in the 1 tail test this usually indicates the means are different - i.e. stochastically larger or smaller in one population compared to the other. In the two tailed test this usually indicates that the samples were drawn from different populations.

The research methodology was to use the rank scores of judges to dichotomise the sample. The mailed questionnaire provided 110 useable rank judgements. The degree of agreement between the judges regarding particular companies needed to be assessed. The most appropriate tool for this is Kendall's Coefficient of Concordance (W).

This is a test for the agreement of judges in their ranking of the entities. The W coefficient is a measure of how the cases, (judges) agree on the set of variables, (companies). A zero score means no agreement, 1 means perfect agreement. A high or significant value of W may be interpreted as meaning that the judges are applying, essentially, the same standard in ranking the cases.

iii) The sample frame and sampling method

There were two separate areas for each set of data - independent and dependent.

a) The independent data - the Peer Group judgements

The sample frame for this section was the Institute of Marketing's Construction Industry Group membership list. This provided a sound sample frame of practising marketing executives within the industry under study. However, it is not known how many marketing executives in the U.K. Construction Industry are not members of this Group. Unfortunately, it was not possible to identify any other list source to augment this Group.

In effect a census, rather than a sample was taken i.e. all 500 members of the Group were forwarded a questionnaire.

b) The dependent data - the company performance data

Several sources were used to develop the sample frame for this area. They are as follows:

- FINANCIAL TIMES SHARE INDEX. JULY, 1983
- SAVORY MILLN'S BUILDING BOOK. 1983
- HOUSE'S GUIDE TO THE CONSTRUCTION INDUSTRY. 1982
- CONSTRUCTION NEWS. JULY, 1983

A list of 89 companies was assembled representing a sample frame of the largest, publicly quoted companies in the industry.

The sample was drawn on a judgement basis following the criteria set out below:-

1. Firms with very low turnover levels (and consequently differing fixed costs and economies of scale levels) were eliminated, - break off point being around £5M p.a. turnover. The average turnover for the companies selected, over the three year period, was £200M p.a.
2. A broad geographical mix of companies was aimed for. However, many companies in the frame, although being both national and international, have London head offices.
3. A mix of business areas was aimed for i.e. civil engineering, industrial/commercial building, but specific specialist segments were omitted e.g. House building.
4. The sample was to contain those companies of which the judges were likely to have knowledge and experience.

5. The companies in the sample needed to be listed in Savory Milln's analysis to ensure direct comparability of performance data.

In all, a total of 38 companies (42%) were selected from the 89 in the frame.

iv) The method of splitting the sample into two groups; 'marketers' and 'non-marketers'.

This exercise was clearly to be an important step in the methodology. Each company or case was to be placed in either the marketing oriented or the non-marketing oriented category. Obviously, the decision to place any particular company could have a marked effect on the average performance of that category. To avoid bias on the part of the researcher, the methodology was designed to use the judges' rankings to sort the sample. The results of the study show that the majority of judges were able to offer a rank for each company. The highest non response for any one company was 35 (32%); the lowest; 1 (0.9%); (i.e. out of 110 responses).

The mean rank of the judges scores was then computed by adding each judge's score and dividing by the number of scores given, i.e. the mean of those judges who responded on that particular company. The poles of the scale were 1 = outstanding; 5 = poor. Therefore, the lower the mean score the more marketing oriented the judges felt the company was, and vice versa.

The cut off point was 3; - companies having a mean rank of 3.00 and under were categorised as 'marketers', (12 companies); and those with a mean rank of 3.1 and over were categorised as 'non-marketers'; (26 companies). This was chosen because an average and higher ranking demonstrated the judges' view that the firm was marketing oriented.

v) The method of data collection

The method adopted was the self completion questionnaire. The evolution of the research methodology having been covered above, this section will deal with the detail of the data collection. As stated, a self completion mailed questionnaire was selected. This was designed on a fully structured, non-disguised basis. The objectives were as follows:

- Primary - • to obtain scaled judgements by the respondents on the sample of companies in the study.
- Secondary - • to obtain data regarding the definition used by the respondents for their judgements.
- to obtain data regarding the respondents' characteristics i.e. business activity, company scale, job title, overall view of the industry's adoption of the marketing concept and their evaluation of their own company.
 - where consistent with the primary objective, to structure the questions to allow validation with the study by Hooley, West & Lynch (1984).

- to structure the questions to assess reliability of response by the respondents.

a) Question format

Of the nine questions, six were multiple response, two were open questions, and one was scaled. The method of answering was structured so that minimum time would be needed for coding for computer analysis. The question content had to meet the following criteria:-

- The terms used would be familiar to the respondents.
- The questions were not ambiguous.
- There was no prestige bias present in the questions.
- There were no leading or pressurising questions.
- The questions followed a logical sequence.
- The instructions to the respondents were clear and easy to understand.

More generally, the questionnaire, in total, needed to address the information needs of the research in the shortest format possible.

To quote Crozier (1982)

"Experience and discussion with colleagues suggest a common intuitive hypothesis that willingness to read and answer a question is inversely related to its length"

b) The scaled question

The primary objective of the data collection tool was to obtain the respondents' judgement of the adoption of the marketing concept by

the companies in the sample. It was decided to use an unbalanced itemised scale which was pre-tested with the pilot group.

The work of Jacobs (1970), was found to be particularly useful in developing the questionnaire.

c) Pre test

The questionnaire was pre-tested in July, 1985. The respondents were selected because they were industry experts, representative of the sample frame. Five major areas were probed:

- 1) Were the definitions used acceptable to them?
- 2) Did they find any ambiguities?
- 3) Were there, in their opinion, any erroneous assumptions?
- 4) Were the multiple choice options complete?
- 5) Did they find the questionnaire easy to complete?
- 6) Did the scale used work with the pre test sample?

Following the pre-test the questionnaire was edited accordingly.

Non response bias

Non response bias was seen as a potential problem area with this form of data collection. Armstrong & Overton (1979);

"If persons who respond differ substantially from those who do not, the results do not directly allow one to say how the entire sample would have responded - certainly an important step before a sample is generalised to the population".

A review of the literature suggests several different methods of dealing with this problem:

- Compare results with known values for the population.
- Subjective estimates - i.e. people who are interested in the subject matter are more likely to respond.
- Extrapolation methods.
- Sampling non-respondents.

However, Crozier (1982) provides evidence that non response bias may not be the problem it has been traditionally stated to be. On the basis of a review of a large number of comparable studies he concludes,

"Although there may be no hard evidence that non response is necessarily a source of bias in all cases, few researchers would deny that a low return rate nevertheless causes them concern, intuition contradicting the logic of published studies".

Crozier's view is that it is better to take steps prior to the posting rather than attempt to adjust for non response when the scripts are returned.

He sets out a check list for "maximising" response:

- Respondent orientation - make it attractive to the respondent.
- Question content - the nature of the wording, ease of answering.
- Sequence - logical flow of questions.
- Presentation - a printed questionnaire that is easy to read.

- The mailing - origin of the research, clear targeting on the respondent, persuasive covering letter, return envelope (freepost), incentives.
- Anonymity - for the respondent.
- Follow up
- Pre-testing and amendment

All of the above points were taken into consideration during the drafting of the questionnaire and also the covering letter. (The latter is presented in App. 7.)

CHAPTER SIX

PRESENTATION OF THE RESEARCH RESULTS

6.1. INTRODUCTION

The research results will be presented as follows:

6.2. Results of questionnaire to peer group

6.3. Sample companies' performance

6.4. Consolidation

6.5. Summary

6.2. Results of questionnaire of peer group

The questionnaire (see App. 6) covered three broad issues:-

- The characteristics of the respondent; (Questions A,B,C,D.)
- Their definition of marketing; (Questions E,F.)
- Their perceptions of their industry's adoption, their peers' adoption and, their own; adoption of the marketing orientation, (Questions G, H, I.)

The results are presented below:

6.2.1 Characteristics of respondents

Table 14

Question A. "Which of the following best describes your company?"

	Frequency	Percent	Valid Percent	Cum Percent
Manufacturer of primary building products	14	12.7	12.7	12.7
Manufacturer of finished building products	21	19.1	19.1	31.8
Builders' Merchant	2	1.8	1.8	33.6
Main Contractor	22	20.0	20.0	53.6
Specialist sub-contractor	15	13.6	13.6	67.3
Other, please specify	<u>36</u>	<u>32.7</u>	<u>32.7</u>	<u>100.0</u>
Total	110	100.0	100.0	

Valid cases 110 Missing cases 0

Table 15

Question B. "What is the approximate number of employees in your firm?"

	Frequency	Percent	Valid Percent	Cum Percent
Less than 100	40	36.4	36.4	36.4
100 - 249	17	15.5	15.5	51.8
250 - 499	13	11.8	11.8	63.6
500 - 999	18	16.4	16.4	80.0
More than 1,000	<u>22</u>	<u>20.0</u>	<u>20.0</u>	<u>100.0</u>
Total	110	100.0	100.0	

Valid cases 110 Missing cases 0

Table 16

Question C. "What is your job title?"

	Frequency	Percent	Valid Percent	Cum Percent
Chairman/Managing Director	28	25.5	25.5	25.5
Marketing Director	9	8.2	8.2	33.6
Sales Director	4	3.6	3.6	37.3
Marketing Manager	14	12.7	12.7	50.0
Sales Manager	14	12.7	12.7	62.7
Other, please specify	<u>41</u>	<u>37.3</u>	<u>37.3</u>	<u>100.0</u>
Total	110	100.0	100.0	
Valid cases 110 Missing cases 0				

Table 17

Question D. "Please give your actual title?"

	Frequency	Percent	Valid Percent	Cum Percent
"Marketing"	33	30.0	33.7	33.7
"Sales"	21	19.1	21.4	55.1
"Production"	7	6.4	7.1	62.2
"Misc."	37	33.6	37.8	100.0
"Non-response"	<u>12</u>	<u>10.9</u>	<u>MISSING</u>	
Total	110	100.0	100.0	
Valid cases 98 Missing cases 12				

6.2.2 Their Definition of Marketing

Table 18

Question E. "The Institute of Marketing has defined Marketing as*
Do you agree with this definition in the context of
the Construction Industry?"

	Frequency	Percent	Valid Percent	Cum Percent
Yes	88	80.0	81.5	81.5
No	14	12.7	13.0	94.4
Undecided	6	5.5	5.6	100.0
Non-response	2	1.8	<u>MISSING</u>	
Total	110	100.0	100.0	

Valid cases 108 Missing cases 2

Table 19

Question F. "If No, please give your definition of Marketing
appropriate to the Construction Industry"

	Frequency	Percent	Valid Percent	Cum Percent
Non-response	<u>110</u>	<u>100.0</u>	<u>MISSING</u>	
Total	110	100.0	100.0	

Valid cases 0 Missing cases 110 (non-response)

* "The Management function which organises and directs all those business activities involved in assessing and converting purchasing power into effective demand for a specific product or service to the final customer so as to achieve the profit target or other objectives set by the company".

6.2.3 Respondents' perceptions of the adoption of the Marketing Concept

Table 20

Question G. "Using the I.O.M. definition, please give opinion of U.K. Main Contractors' adoption of the marketing concept compared to Capital Goods industries during the first half of the 1980's."

	Frequency	Percent	Valid Percent	Cum Percent
Outstanding	-	-	-	-
Above average	4	3.6	3.7	3.7
Average	35	31.8	32.4	36.1
Below Average	53	48.2	49.1	85.2
Poor	16	14.5	14.8	100.0
Non-response	2	1.8	MISSING	
Total	110	100.0	100.0	

Valid cases 108 Missing cases 2

Question H. "We have selected, randomly, 38 well know main contractors. Please use your expert opinion and rank each contractor using the above scale, on their adoption of the marketing orientation. Enter your answers in the boxes on the right."

The responses to the above question are presented in Tables 21 and 22, as frequencies and valid percentages, respectively. By valid percentages we mean percentages per category based on the total number of responses being 100.

The average number of non-responses to this question was 17, (min. 1; max. 35).

The code is:

O/S Outstanding
A.A. Above Average
A. Average
B.A. Below Average
P Poor

The Kendall's Coefficient of Concordance computed on this data was .378, with chi-square of 973.46 and significance of 0.00%. This suggests a high degree of concordance between the judges. The significance measure suggests that the results did not occur by chance.

Table 21

Q.H : FREQUENCIES

	O/S	A.A.	A.	B.A.	P.	TOT
Aberdeen Construction	4	7	26	30	13	80
Bett Bros.	2	4	18	27	24	75
Henry Boot	1	23	50	26	3	103
Brown & Jackson	1	4	22	30	16	73
Bryant Holdings	-	24	41	23	2	90
Burnett & Hallamshire	1	1	24	34	20	80
R. Costain	5	46	47	8	-	106
Derek Crouch	-	14	37	31	8	90
R.M. Douglas	2	24	52	22	3	103
Fairclough Construction Group	7	44	45	11	-	107
John Finlan	3	12	21	30	14	80
French Kier Construction	2	41	42	16	4	105
Galiford Brindley	2	6	35	30	10	83
M.J. Gleeson	1	5	46	36	7	95

Table 21 continued

	O/S	A. A.	A.	B. A.	P.	TOT
W. & J. Glossop	4	1	29	31	21	86
Higgs & Hill	4	53	37	9	2	105
I.D.C. Group	9	56	23	12	3	103
John Laing	22	63	18	4	1	108
Walter Lawrence	-	14	48	26	3	91
F.J.C. Lilley	1	15	37	33	3	89
Y.J. Lovell	16	50	20	15	3	104
Marchwiel Holdings	2	17	32	34	5	90
Stanley Miller	3	5	19	34	15	76
A. Monk & Co.	1	14	39	34	9	97
John Mowlem	4	33	50	13	1	101
Newarthill	3	7	26	32	13	81
C.H. Pearce	1	12	22	34	17	86
Pochin's	2	7	29	37	12	87
Rush & Tomkins	1	18	46	27	6	98
William Sindall	1	6	23	34	18	82

Table 21 continued

	O/S	A. A.	A.	B. A.	P.	TOT
Streeters of Godalming	2	6	18	34	22	82
Tarmac	16	60	29	1	1	107
Taylor Woodrow	21	63	19	6	-	109
Tilbury Group	2	13	48	26	4	93
Trafalgar House (Cementation)	12	47	39	9	-	107
Turriff	-	11	40	35	8	94
Tysons	3	4	27	40	11	85
Thomas Warrington	4	4	17	29	23	77
Whatlings	2	4	24	30	17	77
George Wimpey	11	51	36	6	5	109
Simple Average	4.5	22.2	32.6	24.5	8.7	92.3

Table 22

Q.H : VALID PERCENTAGES

	O/S	A.A.	A.	B.A.	P.	TOT
Aberdeen Construction	5.0	8.8	32.5	37.5	16.3	100
Bett Bros.	2.7	5.3	24.0	36.0	32.0	100
Henry Boot	1.0	22.3	48.5	25.2	2.9	100
Brown & Jackson	1.4	5.5	30.1	41.1	21.9	100
Bryant Holdings	-	26.7	45.6	25.6	2.2	100
Burnett & Hallamshire	1.3	1.3	30.0	42.5	25.0	100
R. Costain	4.7	43.4	44.3	7.5	-	100
Derek Crouch	-	15.6	41.1	34.4	8.9	100
R.M. Douglas	1.9	23.3	50.5	21.4	2.9	100
Fairclough Construction Group	6.5	41.1	42.1	10.3	-	100
John Finlan	3.7	15.0	26.3	37.5	17.5	100
French Kier Construction	1.9	39.0	40.0	15.2	3.8	100
Galiford Brindley	2.4	7.2	42.2	36.1	12.0	100
M.J. Gleeson	1.1	5.3	48.4	37.9	7.4	100

Table 22 continued

	O/S	A.A.	A.	B.A.	P.	TOT
W. & J. Glossop	4.7	1.2	33.7	36.0	24.4	100
Higgs & Hill	3.8	50.5	35.2	8.6	1.9	100
I.D.C. Group	8.7	54.4	22.3	11.7	2.9	100
John Laing	20.4	58.3	16.7	3.7	0.9	100
Walter Lawrence	-	15.4	52.7	28.6	3.3	100
F.J.C. Lilley	1.1	16.9	41.6	37.1	3.4	100
Y.J. Lovell	15.4	48.1	19.2	14.4	2.9	100
Marchwiel Holdings	2.2	18.9	35.6	37.8	5.6	100
Stanley Miller	3.9	6.6	25.0	44.7	19.7	100
A. Monk & Co.	1.0	14.4	40.2	35.1	9.3	100
John Mowlem	4.0	32.7	49.5	12.9	1.0	100
Newarthill	3.7	8.6	32.1	39.5	16.0	100
C.H. Pearce	1.2	14.0	25.6	39.5	19.8	100
Pochin's	2.3	8.0	33.3	42.5	13.8	100
Rush & Tomkins	1.0	18.4	46.9	27.6	6.1	100
William Sindall	1.2	7.3	28.0	41.5	22.0	100

Table 22 continued

	O/S	A.A.	A.	B.A.	P.	TOT
Streeters of Godalming	2.4	7.3	22.0	41.5	26.8	100
Tarmac	15.0	56.1	27.1	0.9	0.9	100
Taylor Woodrow	19.3	57.8	17.4	5.5	-	100
Tilbury Group	2.2	14.0	51.6	28.0	4.3	100
Trafalgar House (Cementation)	11.2	43.9	36.4	8.4	-	100
Turriff	-	11.7	42.6	37.2	8.5	100
Tysons	3.5	4.7	31.8	47.1	12.9	100
Thomas Warrington	5.2	5.2	22.1	37.7	29.9	100
Whatlings	2.6	5.2	31.2	39.0	22.1	100
George Wimpey	10.1	46.8	33.0	5.5	4.6	100
Simple Average	4.5	22.1	35.0	28.0	10.4	100

Table 23

Question I. Please rank your own company on the same scale

	Frequency	Percent	Valid Percent	Cum Percent
Outstanding	5	4.5	4.6	4.6
Above Average	47	42.7	43.1	47.7
Average	36	32.7	33.0	80.7
Below Average	17	15.5	15.6	96.3
Poor	4	3.6	3.7	100.0
Non-response	1	.9	<u>MISSING</u>	
Total	110	100.0	100.0	
Valid cases	109	Missing cases	1	

Comments

The respondents came from a broad mix of industry areas, size and job titles. Some 34% of the sample were contractors (20% main and 14% specialist sub-contractors). The single largest category of 'other' (33%) was made up of a wide variety of industry areas including professional services (technical and commercial), plant hire and academic. Half of the sample employed less than 250 people and there was a reasonably good spread of scale of company. Certainly the majority of the sample held a senior position - 37% at Director level and a further 26% at Sales/Marketing Manager level. Again, there is a large 'other' category, this is made up of "Production" areas (such as Contracts Manager and Chief Estimator) and a wide variety of miscellaneous areas. This includes professional, technical and commercial job titles.

The vast majority of respondents (80%) agreed with the Institute's definition. This is gratifying as it does suggest the majority of respondents will be applying the same criteria when assessing the sample companies' adoption of the marketing orientation. Of those that either disagreed (13%) or were undecided (5.5%), none chose to offer an alternative definition.

The sample was, on the whole, of the opinion that the Construction Industry had not been as good as other Capital Goods Industries in its adoption of the marketing concept. Some 62% felt that their industry was 'below average' or 'poor'.

The core of the questionnaire - the respondents' judgements of the selected companies' adoption of the marketing orientation - was answered by the majority of the respondents. Sixty six, (60%) respondents provided scores for every company listed. Comparison of the respondents' score for the industry as a whole, and the simple average for the companies listed, is presented in Table 24.

Table 24

Valid Percentages

	<u>Score for industry*1</u>	<u>Simple average*2</u>
Outstanding	0	4.5
Above average	3.7	22.1
Average	32.4	35.0
Below average	49.1	28.0
Poor	14.8	10.4
Non response	2	N. A.

*1 from Question G (- see table 20)

*2 Simple average of Question H (- see Table 22)

As can be expected, there is a basically 'bell' shape to the distribution. However, scanning the matrix does suggest that the respondents did not simply "tick boxes", i.e. replicate their answers.

The score for the final question - Q.I can also be compared to the simple average for Q.H.

Table 25

Valid Percentages

	<u>Q.H.*1</u>	<u>Q.I.</u>
Outstanding	4.5	4.6
Above average	22.1	43.1
Average	35.0	33.0
Below average	28.0	15.6
Poor	<u>10.4</u>	<u>3.7</u>
Total	100.0	100.0
Non response (No.)	N.A.	1

*1 Simple average from Table 22

6.2.4. Crosstabulations

Within the structure of the questionnaire it was possible to review respondents' attitudes in terms of their characteristics. Basically, there were three major characteristics:

- Type of company i.e. nature of business.
- Scale of company i.e. number of employees.
- Job title.

There were four attitudinal areas of interest - acceptance of the I.o.M. definition (Q.E.), ranking of the Construction Industry (Q.G.), the means of ranks for each company (Q.H.) and ranks for their own company (Q.I).

The crosstabulations are presented below.

Acceptance of the I.o.M. definition of marketing.

Cross Tabulation 1

By Type Of Company

TYPE	COUNT				ROW TOTAL
	ROW PCT	YES	NO	UNDECIDED	
	COL PCT				
	TOT PCT				
MANUFACTURER OF PRIMARY BUILDING PRODUCTS		13	1		14
		92.9	7.1		13.0
		14.8	7.1		
		12.0	.9		
MANUFACTURER OF FINISHED BUILDING PRODUCTS		17	3		20
		85.0	15.0		18.5
		19.3	21.4		
		15.7	2.8		
BUILDERS' MERCHANT		2			2
		100.0			1.9
		2.3			
		1.9			
MAIN CONTRACTOR		13	4	4	21
		61.9	19.0	19.0	19.4
		14.8	28.6	66.7	
		12.0	3.7	3.7	
SPECIALIST SUB-CONTRACTOR		13	2		15
		86.7	13.3		13.9
		14.8	14.3		
		12.0	1.9		
OTHER		30	4	2	36
		83.3	11.1	5.6	33.3
		34.1	28.6	33.3	
		27.8	3.7	1.9	
	COLUMN TOTAL	88	14	6	108
		81.5	13.0	5.6	100.0

No. missing observations - 2

Comment Cross Tabulation 1.

Main contractors had the lowest level of agreement with the I.o.M. definition. Moreover, 4 respondents disagreed and 4 were 'undecided'. This seems to reinforce the view that Main Contractors are unsure about marketing. Ironically, sub-contractors who are considered by the industry to be less professional than Main Contractors, had a higher proportion of 'Yes' responses.

Cross Tabulation 2

By Scale of Organisation

No. EMPLOYEES	COUNT				ROW TOTAL
	ROW PCT				
	COL PCT	YES	NO	UNDECIDED	
	TOT PCT				
LESS THAN 100		34	3	2	39
		87.2	7.7	5.1	36.1
		38.6	21.4	33.3	
		31.5	2.8	1.9	
100 - 249		14	3		17
		82.4	17.6		15.7
		15.9	21.4		
		13.0	2.8		
250 - 499		9	1	3	13
		69.2	7.7	23.1	12.0
		10.2	7.1	50.0	
		8.3	.9	2.8	
500 - 999		12	5		17
		70.6	29.4		15.7
		13.6	35.7		
		11.1	4.6		
1000 +		19	2	1	22
		86.4	9.1	4.5	20.4
		21.6	14.3	16.7	
		17.6	1.9	.9	
	COLUMN TOTAL	88	14	6	108
		81.5	13.0	5.6	100.0

No. missing observations - 2

Comment Cross Tabulation 2.

Given that larger companies have better developed management systems, one would have expected more agreement, (and certainly less "undecided" responses), as the scale of company increases. However, this is not the case; 3 (23%) of the 250-499 number of employees group were undecided.

Cross Tabulation 3

By Job Title of Respondent

JOB TITLE	COUNT				ROW TOTAL
	ROW PCT				
	COL PCT				
	TOT PCT	YES	NO	UNDECIDED	
CHAIRMAN/ MANAGING DIRECTOR		25	1	1	27
		92.6	3.7	3.7	25.0
		28.4	7.1	16.7	
		23.1	.9	.9	
MARKETING DIRECTOR		7	1	1	9
		77.8	11.1	11.1	8.3
		8.0	7.1	16.7	
		6.5	.9	.9	
SALES DIRECTOR		4			4
		100.0			3.7
		4.5			
		3.7			
MARKETING MANAGER		8	3	2	13
		61.5	23.1	15.4	12.0
		9.1	21.4	33.3	
		7.4	2.8	1.9	
SALES MANAGER		11	3		14
		78.6	21.4		13.0
		12.5	21.4		
		10.2	2.8		
OTHER		33	6	2	41
		80.5	14.6	4.9	38.0
		37.5	42.9	33.3	
		30.6	5.6	1.9	
	COLUMN	88	14	6	108
	TOTAL	81.5	13.0	5.6	100.0

No. missing observations - 2

Comment Cross Tabulation 3.

There does not appear to be any differences between the Job Title groups. However, it is noticeable that of the 20 Marketing Directors and Marketing Managers, 3 were 'undecided'.

Ranking of the Construction Industry as a whole.

Cross Tabulation 4

By Type Of Company

	COUNT					ROW
	ROW PCT					TOTAL
	COL PCT	ABOVE	AVERAGE	BELOW	POOR	
	TOT PCT	AVERAGE	AVERAGE	AVERAGE	POOR	
MANUFACTURER OF PRIMARY BUILDING PRODUCTS	1	8	5			14
	7.1	57.1	35.7			13.0
	25.0	22.9	9.4			
	.9	7.4	4.6			
MANUFACTURER OF FINISHED BUILDING PRODUCTS	1	7	10	2		20
	5.0	35.0	50.0	10.0		18.5
	25.0	20.0	18.9	12.5		
	.9	6.5	9.3	1.9		
BUILDERS' MERCHANT			1	1		2
			50.0	50.0		1.9
			1.9	6.3		
			.9	.9		
MAIN CONTRACTOR	1	5	13	2		21
	4.8	23.8	61.9	9.5		19.4
	25.0	14.3	24.5	12.5		
	.9	4.6	12.0	1.9		
SPECIALIST SUB-CONTRACTOR	1	2	9	3		15
	6.7	13.3	60.0	20.0		13.9
	25.0	5.7	17.0	18.8		
	.9	1.9	8.3	2.8		
OTHER		13	15	8		36
		36.1	41.7	22.2		33.3
		37.1	28.3	50.0		
		12.0	13.9	7.4		
COLUMN TOTAL	4	35	53	16		108
	3.7	32.4	49.1	14.8		100.0

No. missing observations - 2

Comment Cross Tabulation 4.

None of the repondents recorded an 'outstanding' score. Also, there are differences in perception between the groups: 'Manufacturers of finished products', 'Main Contractors' and 'Specialist sub-contractors' perceive a below average situation; on the other hand 'Manufacturers of Primary Building products' perceive an above average situation. The 'other' category (including professionals) shows an interesting average/below average split.

Cross Tabulation 5

By Scale of Organisation

No. EMPLOYEES	COUNT					ROW	
	ROW PCT	COL PCT	ABOVE	AVERAGE	BELOW	POOR	TOTAL
	TOT PCT	AVERAGE	AVERAGE	AVERAGE	POOR		
LESS THAN 100		3	15	12	9		39
		7.7	38.5	30.8	23.1		36.1
		75.0	42.9	22.6	56.3		
		2.8	13.9	11.1	8.3		
100 - 249			7	8	2		17
			41.2	47.1	11.8		15.7
			20.0	15.1	12.5		
			6.5	7.4	1.9		
250 - 499			3	10			13
			23.1	76.9			12.0
			8.6	18.9			
			2.8	9.3			
500 - 999			4	12	1		17
			23.5	70.6	5.9		15.7
			11.4	22.6	6.3		
			3.7	11.1	.9		
1000 +			1	6	11	4	22
			4.5	27.3	50.0	18.2	20.4
			25.0	17.1	20.8	25.0	
			.9	5.6	10.2	3.7	
	COLUMN		4	35	53	16	108
	TOTAL		3.7	32.4	49.1	14.8	100.0

No. missing observations - 2

Comment Cross Tabulation 5.

This crosstabulation shows an interesting similarity between the two extremes of the scale i.e. less than 100 employees and 1,000+ employees. Both groups have quite broad spreads of responses. Given the expected level of managerial development in larger companies, one would have expected a split around 250 employees with a clear polarisation of perception.

Cross Tabulation 6

By Job Title of Respondent

JOB TITLE	COUNT					ROW TOTAL
	ROW PCT	COL PCT	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	
	TOT PCT					
CHAIRMAN/ MANAGING DIRECTOR	3	10.7	32.1	42.9	14.3	28
	75.0	25.7	22.6	25.0		25.9
	2.8	8.3	11.1	3.7		
MARKETING DIRECTOR	1	11.1	33.3	33.3	22.2	9
	25.0	8.6	5.7	12.5		8.3
	.9	2.8	2.8	1.9		
SALES DIRECTOR	2		50.0	50.0		4
		5.7	3.8			3.7
		1.9	1.9			
MARKET MANAGER	2		15.4	61.5	23.1	13
		5.7	15.1	18.8		12.0
		1.9	7.4	2.8		
SALES MANAGER	5		38.5	46.2	15.4	13
		14.3	11.3	12.5		12.0
		4.6	5.6	1.9		
OTHER	14		34.1	53.7	12.2	41
		40.0	41.5	31.3		38.0
		13.0	20.4	4.6		
	COLUMN TOTAL	4	35	53	16	108
		3.7	32.4	49.1	14.8	100.0

No. missing observations - 2

Comment Cross Tabulation 6.

Whilst there is a broader spread of response in the two 'Director' categories, the responses from the groups are generally similar. There is no difference in attitude on this dimension, by Job Title.

Mean rankings of the sample companies.

Cross Tabulation 7

By Type of Company

Mean Rank (Frequencies only)

	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	TOTAL
MANUFACTURER OF PRIMARY BUILDING PRODUCTS	-	9	5	-	14
MANUFACTURER OF FINISHED BUILDING PRODUCTS	1	10	9	1	21
BUILDERS MERCHANTS	-	1	1	-	2
MAIN CONTRACTOR	-	7	15	-	22
SPECIALIST SUB-CONTRACTOR	-	5	10	-	15
OTHER	-	16	19	1	36
TOTAL	1	48	59	2	110

Comment Cross Tabulation 7.

Generally, all the sub-groups score around the "split" point, i.e. 2.1-3.00 and 3.1-4.00, ("Marketing" and "Non-marketing" respectively).

Only Manufacturers of Finished Building Products show a broader spread of responses.

Cross Tabulation 8

By scale of Company

(Frequencies only)

	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	TOTAL
Less than 100	-	21	18	1	40
100 - 249	-	7	10	-	17
250 - 499	-	6	7	-	13
500 - 999	-	9	8	1	18
1000 +	1	5	16	-	22
Total	1	48	59	2	110

Comment Cross Tabulation 8.

Again, there is a concentration around the 'split' point. However respondents in less than 100 employees, 500 - 999, and 1,000+ have a broader spread of responses than the other two groups.

Cross Tabulation 9

By Job Title of Respondent

(Frequencies only)

	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	TOTAL
CHAIRMAN/ MANAGING DIRECTOR	-	13	14	1	28
MARKETING DIRECTOR	-	3	6	-	9
SALES DIRECTOR	-	1	3	-	4
MARKETING MANAGER	-	8	6	-	14
SALES MANAGER	-	7	6	1	14
OTHER	1	16	24	-	41
TOTAL	1	48	59	2	110

Comment Cross Tabulation 9

As has been the case with earlier crosstabulations, there does not appear to be any difference between the Job Title sub-groups.

Ranking of their own Company.

Cross Tabulation 10

By Type Of Company

	COUNT						ROW
	ROW PCT	COL PCT	OUT-	ABOVE	AVERAGE	BELOW	TOTAL
	TOT PCT	STANDING	AVERAGE	AVERAGE	AVERAGE	POOR	
MANF. OF	1	6	4	2	1	14	
PRIMARY	7.1	42.9	28.6	14.3	7.1	12.8	
BUILDING	20.0	12.8	11.1	11.8	25.0		
PRODS.	.9	5.5	3.7	1.8	.9		
MANF. OF	1	11	6	3		21	
FINISHED	4.8	52.4	28.6	14.3		19.3	
BUILDING	20.0	23.4	16.7	17.6			
PRODS.	.9	10.1	5.5	2.8			
BUILDERS'				2		2	
MERCHANT				100.0		1.8	
				1.8			
		8	8	6		22	
MAIN		36.4	36.4	27.3		20.2	
CONTRACTOR		17.0	22.2	35.3			
		7.3	7.3	5.5			
		3	10	2		15	
SPECIALIST		20.0	66.7	13.3		13.8	
SUB-CONTRACTOR		6.4	27.8	11.8			
		2.8	9.2	1.8			
	3	19	8	2	3	35	
OTHER	8.6	54.3	22.9	5.7	8.6	32.1	
	60.0	40.4	22.2	11.8	75.0		
	2.8	17.4	7.3	1.8	2.8		
						109	
COLUMN	5	47	36	17	4	100.0	
TOTAL	4.6	43.1	33.0	15.6	3.7		

No. missing observations - 1

Comment Cross Tabulation 10.

Where there is an 'Outstanding' score in a sub-group there is generally a 'Poor' score also. Manufacturers (Primary and Finished) and Others see themselves as 'better at Marketing' than Main Contractors and sub-contractors see themselves.

Cross Tabulation 11

By Scale of Company

No. EMPLOYEES	COUNT	OUT- STANDING	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	POOR	ROW TOTAL
	ROW PCT						
	COL PCT						
		2	21	9	4	4	40
		5.0	52.5	22.5	10.0	10.0	36.7
LESS THAN 100		40.0	44.7	25.0	23.5	100.0	
		1.8	19.3	8.3	3.7	3.7	
100 - 249			7	8	2		17
			41.2	47.1	11.8		15.6
			14.9	22.2	11.8		
			6.4	7.3	1.8		
250 - 499			4	4	5		13
			30.8	30.8	38.5		11.9
			8.5	11.1	29.4		
			3.7	3.7	4.6		
500 - 999		2	8	5	2		17
		11.8	47.1	29.4	11.8		15.6
		40.0	17.0	13.9	11.8		
		1.8	7.3	4.6	1.8		
1000 +		1	7	10	4		22
		4.5	31.8	45.5	18.2		20.2
		20.0	14.9	27.8	23.5		
		.9	6.4	9.2	3.7		
	COLUMN	5	47	36	17	4	109
	TOTAL	4.6	43.1	33.0	15.6	3.7	100.0

No. missing observations - 1

Comment Cross Tabulation 11.

The less than 100 employees group shows a broad spread of response. There is, on-the-other-hand, much grouping of responses in categories, 100-249 and 250-499. Also, the last two categories show a broadly similar distribution. Therefore there appears to be three distinct bands. The bigger the company the higher the respondents' perception of their own performance.

Cross Tabulation 12

By Job Title

JOB TITLE	COUNT						ROW
	TOT PCT	OUT- STANDING	ABOVE AVERAGE	AVERAGE	BELOW AVERAGE	POOR	TOTAL
CHAIRMAN/ MANAGING DIRECTOR			20	7	1		28
			71.4	25.0	3.6		25.7
			42.6	19.4	5.9		
			18.3	6.4	.9		
MARKETING DIRECTOR			3	4	1	1	9
			33.3	44.4	11.1	11.1	8.3
			6.4	11.1	5.9	25.0	
			2.8	3.7	.9	.9	
SALES DIRECTOR			1	2	1		4
			25.0	50.0	25.0		3.7
			2.1	5.6	5.9		
			.9	1.8	.9		
MARKETING MANAGER			3	5	6		14
			21.4	35.7	42.9		12.8
			6.4	13.9	35.3		
			2.8	4.6	5.5		
SALES MANAGER			7	4	3		14
			50.0	28.6	21.4		12.8
			14.9	11.1	17.6		
			6.4	3.7	2.8		
OTHER		5	13	14	5	3	40
		12.5	32.5	35.0	12.5	7.5	36.7
		100.0	27.7	38.9	29.4	75.0	
		4.6	11.9	12.8	4.6	2.8	
COLUMN TOTAL		5	47	36	17	4	109
		4.6	43.1	33.0	15.6	3.7	100.0

Comment Cross Tabulation 12.

Chairman/Directors seem to perceive their companies more favourably than other groups. Probably the most interesting difference is between Marketing Managers - 43%, below average and Sales Managers - 50%, above average.

6.3. Sample companies' performance

Performance data for the 38 companies over the same three year period was collected, as follows:

Table 26

Sales Per Annum (£000's)

	1980	1981	1982
Mean	198,377	202,710	231,195
Minimum	5,740	6,305	4,604
Maximum	1,190,040	1,051,100	1,399,790
Standard Dev.	293,428	282,065	334,709

Table 27

Net Profit to Sales (%)

	1980	1981	1982
Mean	3.55	4.03	4.1
Minimum	0.10	0.90	0.4
Maximum	11.10	13.50	14.0
Standard Dev.	2.70	2.79	2.72

Table 28

Return on Capital Employed (%)

	1980	1981	1982
Mean	25.8	24.6	25.2
Minimum	3.4	0.1	0.2
Maximum	88.9	69.9	59.5
Standard Dev.	21.8	17.2	17.6

Table 29

Earnings per Share

	1980	1981	1982
Mean	19.0	19.2	18.4
Minimum	1.3	3.3	0.1
Maximum	106.8	57.3	52.5
Standard Dev.	18.0	11.4	12.5

Four new variables were constructed from these data:

Sales growth: (i.e. the difference between the last year and first year expressed as a % of the first year)

Net profit to sales (average)

Return on Capital employed (average)

Earnings per share (average)

Table 30

Sales Growth % - Frequencies

<u>VALUE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>VALID PERCENT</u>	<u>CUM PERCENT</u>
-20.12	1	2.6	2.6	2.6
-19.79	1	2.6	2.6	5.3
-19.32	1	2.6	2.6	7.9
-17.11	1	2.6	2.6	10.5
-16.64	1	2.6	2.6	13.2
-12.68	1	2.6	2.6	15.8
-11.92	1	2.6	2.6	18.4
-10.51	1	2.6	2.6	21.1
-9.59	1	2.6	2.6	23.7
-9.28	1	2.6	2.6	26.3
-7.78	1	2.6	2.6	28.9
-6.71	1	2.6	2.6	31.6
-.21	1	2.6	2.6	34.2
.45	1	2.6	2.6	36.8
1.36	1	2.6	2.6	39.5
3.43	1	2.6	2.6	42.1
5.44	1	2.6	2.6	44.7
7.87	1	2.6	2.6	47.4
9.22	1	2.6	2.6	50.0
10.53	1	2.6	2.6	52.6
11.32	1	2.6	2.6	55.3
14.15	1	2.6	2.6	57.9
16.27	1	2.6	2.6	60.5
16.44	1	2.6	2.6	63.2
17.63	1	2.6	2.6	65.8
18.38	1	2.6	2.6	68.4
18.98	1	2.6	2.6	71.1
22.12	1	2.6	2.6	73.7
22.66	1	2.6	2.6	76.3
22.75	1	2.6	2.6	78.9
29.61	1	2.6	2.6	81.6
30.30	1	2.6	2.6	84.2
31.36	1	2.6	2.6	86.8
31.86	1	2.6	2.6	89.5
45.15	1	2.6	2.6	92.1
51.78	1	2.6	2.6	94.7
93.76	1	2.6	2.6	97.4
167.78	<u>1</u>	<u>2.6</u>	<u>2.6</u>	100.0
	38	100.0	100.0	

Missing cases 0

Table 31

Net Profit to Sales, Average - Frequencies

<u>VALUE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>VALID PERCENT</u>	<u>CUM PERCENT</u>
1.07	1	2.6	3.0	3.0
1.20	1	2.6	3.0	6.1
1.27	1	2.6	3.0	9.1
1.37	1	2.6	3.0	12.1
1.60	1	2.6	3.0	15.2
1.70	2	5.3	6.1	21.2
2.07	1	2.6	3.0	24.2
2.10	1	2.6	3.0	27.3
2.27	1	2.6	3.0	30.3
2.30	1	2.6	3.0	33.3
2.40	1	2.6	3.0	36.4
2.63	1	2.6	3.0	39.4
3.07	1	2.6	3.0	42.4
3.23	1	2.6	3.0	45.5
3.37	1	2.6	3.0	48.5
3.40	2	5.3	6.1	54.5
3.43	1	2.6	3.0	57.6
3.67	1	2.6	3.0	60.6
3.80	2	5.3	6.1	66.7
4.17	1	2.6	3.0	69.7
4.27	1	2.6	3.0	72.7
4.67	1	2.6	3.0	75.8
5.23	1	2.6	3.0	78.8
6.47	1	2.6	3.0	81.8
6.57	2	5.3	6.1	87.9
7.87	1	2.6	3.0	90.9
8.13	1	2.6	3.0	93.9
8.60	1	2.6	3.0	97.0
12.87	1	2.6	3.0	100.0
.	<u>5</u>	<u>13.2</u>	<u>MISSING</u>	
TOTAL	38	100.0	100.0	

MISSING CASES 5

Table 32

Return on Capital Employed, Average - Frequencies

<u>VALUE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>VALID PERCENT</u>	<u>CUM PERCENT</u>
5.20	1	2.6	3.2	3.2
5.60	1	2.6	3.2	6.5
6.87	1	2.6	3.2	9.7
7.33	1	2.6	3.2	12.9
10.57	1	2.6	3.2	16.1
13.07	1	2.6	3.2	19.4
13.40	1	2.6	3.2	22.6
13.40	1	2.6	3.2	25.8
14.57	1	2.6	3.2	29.0
15.27	1	2.6	3.2	32.3
15.93	1	2.6	3.2	35.5
16.60	1	2.6	3.2	38.7
16.70	1	2.6	3.2	41.9
16.77	1	2.6	3.2	45.2
17.87	1	2.6	3.2	48.4
18.57	1	2.6	3.2	51.6
21.87	1	2.6	3.2	54.8
28.10	1	2.6	3.2	58.1
28.73	1	2.6	3.2	61.3
30.03	1	2.6	3.2	64.5
31.53	1	2.6	3.2	67.7
36.33	1	2.6	3.2	71.0
37.03	1	2.6	3.2	74.2
43.73	1	2.6	3.2	77.4
45.20	1	2.6	3.2	80.6
48.73	1	2.6	3.2	83.9
48.87	1	2.6	3.2	87.1
53.43	1	2.6	3.2	90.3
54.83	1	2.6	3.2	93.5
56.40	1	2.6	3.2	96.8
71.20	1	2.6	3.2	100.0
.	<u>7</u>	<u>18.4</u>	<u>MISSING</u>	
TOTAL	38	100.0	100.0	

MISSING CASES 7

Table 33

Earnings per share, Average - Frequencies

<u>VALUE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>VALID PERCENT</u>	<u>CUM PERCENT</u>
6.70	1	2.6	3.1	3.1
7.03	1	2.6	3.1	6.3
7.13	1	2.6	3.1	9.4
7.13	1	2.6	3.1	12.5
7.17	1	2.6	3.1	15.6
9.47	1	2.6	3.1	18.8
10.13	1	2.6	3.1	21.9
11.13	1	2.6	3.1	25.0
12.37	1	2.6	3.1	28.1
12.83	1	2.6	3.1	31.3
13.07	1	2.6	3.1	34.4
13.23	1	2.6	3.1	37.5
13.33	1	2.6	3.1	40.6
15.30	1	2.6	3.1	43.8
15.43	1	2.6	3.1	46.9
16.63	1	2.6	3.1	50.0
17.93	1	2.6	3.1	53.1
19.17	1	2.6	3.1	56.3
21.33	1	2.6	3.1	59.4
21.57	1	2.6	3.1	62.5
22.13	1	2.6	3.1	65.6
22.20	1	2.6	3.1	68.8
22.33	1	2.6	3.1	71.9
23.63	1	2.6	3.1	75.0
23.83	1	2.6	3.1	78.1
23.90	1	2.6	3.1	81.3
25.30	1	2.6	3.1	84.4
25.63	1	2.6	3.1	87.5
29.23	1	2.6	3.1	90.6
31.07	1	2.6	3.1	93.8
38.77	1	2.6	3.1	96.9
45.67	1	2.6	3.1	100.0
.	<u>6</u>	<u>15.8</u>	<u>MISSING</u>	
TOTAL	38	100.0	100.0	

MISSING CASES 6

6.4. Consolidation

The first exercise was to dichotomise the sample of firms to establish the marketing oriented and non-marketing oriented companies. This was done by using the mean ranks provided by the judges. The mechanism used was to divide the total score per company by the number of responses to that company. The companies were classified as follows:

less than or equal to 3 = 'marketing oriented'
 greater than or equal to 4 = 'non marketing oriented'

This produced two sub groups as follows:

Marketing oriented - 12 : 32 %
 Non-marketing oriented - 26 : 68 %
 38 100

The first stage in the consolidation of the data was to crosstabulate the above sub groups by each of the performance measures. The results are presented in Cross Tabulations 13-16.

Cross Tabulation 13

Sub groups x Sales growth (average of 3 year period)

	-20% to -10%	-9% to 0	+1% to +10%	+11% to +20%	+21% to +30%	+31% to +40%	+41% and greater	TOTAL
'Marketing'	-	2	1	5	2	1	1	12
'Non- marketing'	8	3	5	3	2	2	3	26
TOTAL	8	5	6	8	4	3	4	38

Comment Cross Tabulation 13.

The 'Marketing oriented' group have a much higher skew to the 'high performance' end of the scale, i.e. 75% of the marketing sub-group compared to 39% of the non-marketing group, scoring above and including 11% growth over the period. This suggests that, on this measure, the marketing oriented group significantly out performed the non-marketing oriented group.

Cross Tabulation 14

sub groups x net profit to sales (average for period) %

	1.0 to 3.0	3.1 to 6.0	6.1 to 9.0	9.1 +	TOTAL
'Marketing'	5	4	2	0	11
'Non-marketing'	9	8	4	1	22
TOTAL	14	12	6	1	33

N.B. 5 missing observations

Comment Cross Tabulation 14.

Given the average breakdown of a main contractors activity (see P.88 above), the cut off point for 'low'/'high' performance was 6%.

Accordingly, the marketing oriented group had 82% of the sub sample in the high performance category, compared to 77% for the non-marketing oriented group. This is not significantly different. Moreover, the non-marketing group scored in the top performance category.

Cross Tabulation 15

sub groups x Return on Capital Employed % (aver. for period)

	0 to 10%	11 to 20%	21 to 30%	31 to 40%	41 to 50%	51% +	TOTAL
'Marketing'	-	4	3	2	1	1	11
'Non-marketing'	5	7	0	2	3	3	20
TOTAL	5	11	3	4	4	4	31

N.B. 7 missing observations

Comment Cross Tabulation 15.

In this case, the cut off point was taken at 30% i.e. low performance, 0 - 30%; high performance 31%+. The marketing oriented group had 36% in the high performance category, the non-marketing oriented group had 40%. Furthermore, the marketing oriented group had no score in the lowest performance category (i.e. 0 - 10%), and the non-marketing oriented group had 3 responses (15%), in the highest performance category, (i.e. 51%+). These data are inconclusive.

Cross Tabulation 16

Sub groups x earnings per share % (aver. for period)

	0 to 10%	11 to 20%	21 to 30%	31 to 40%	41% +	Total
'Marketing'	2	3	5	2	1	13
'Non-Marketing'	4	9	6	1	0	20
TOTAL	6	12	11	3	1	33

N.B. 5 missing observations

Comment Cross Tabulation 16.

In this case, the cut off point was taken at 20% i.e. low performance, 0 - 20%; high performance 21%+. The marketing oriented group scored 61% high performance, the non-marketers, 35%. This is a significant difference. Also, the marketing oriented group had a score in the highest performance band, 41%+.

Using the data generated by the cross tabulations it was possible to calculate the Contingency Coefficients. The first step was to re-draft the tables as 2 x 2 matrices, i.e. splitting the performance measures into 'High'/'Low' performance. The weak point was taken to be that developed in the analysis of the tables. The expected values were constructed on the basis of two assumptions:-

Assumption 1 - If the hypothesis is correct, the majority of marketing oriented firms will have high performance, and the majority of non-marketing firms will have low performance. Taking the frequencies presented in Cross Tabulations 13-16, the expected values would be:

Table 34

Expected Frequencies : Assumption 1

		HIGH	LOW	TOTAL
Sales Growth	Mkt.	11	1	12
	Non. Mkt.	1	25	26
Net Profit To Sales	Mkt.	10	1	11
	Non. Mkt.	1	21	22
Return on Capital Employed	Mkt.	10	1	11
	Non. Mkt.	1	19	20
Earnings per Share	Mkt.	12	1	13
	Non. Mkt.	1	19	20

Assumption 2 - To meet the criterion of Chi Square, that the cell frequency values should not be less than 5, the expected frequencies can be restructured. This is a conservative assumption and tends to work against the hypothesis. However, it is statistically necessary to overcome the problem of low cell counts in Chi Square. On the basis of this assumption the frequencies would be:

Table 35

Expected Frequencies : Assumption 2

		HIGH	LOW	TOTAL
Sales Growth	Mkt.	7	5	12
	Non. Mkt.	5	21	26
Net Profit To Sales	Mkt.	6	5	11
	Non. Mkt.	5	17	22
Return on Capital Employed	Mkt.	6	5	11
	Non. Mkt.	5	15	20
Earnings per Share	Mkt.	8	5	13
	Non. Mkt.	5	15	20

The C values for the performance measures, based on the assumptions set out above, are presented in Table 36.

Table 36

Contingency Coefficient (C) Values

	Assumption One	Assumption Two
Sales Growth	0.85	0.41
Net Profit to Sales	0.85	0.39
Return on Capital Employed	0.92	0.56
Earnings per share	0.79	0.18

The Chi. Square values for each cell are as follows:

Table 37

Chi. Square Values

	Assumption One	Assumption Two
Sales Growth	88.6	7.57
Net Profit to Sales	87.16	5.9
Return on Capital Employed	166.97	14.54
Earnings per Share	55.22	1.07

Comment

Clearly, the Contingency Coefficients based on Assumption One suggests a strong relationship. The significance of C is supported by high

values of Chi. The C Values based on Assumption Two suggest a correlation for the all measures except 'Earnings per Share'.

The Chi. Square values in the case of Assumption Two are not as large as in the case of Assumption One. However, there is evidence that the C value for the measure 'Return on Capital Employed' is significant.

The next stage of the consolidation was to calculate the Kilmogorov-Smirnoff two sample test. The results are as follows:

Table 38

Kilmogorov-Smirnoff Results

	K-S Z	2 Tailed P *1	Table Value
Sales growth	1.102	0.176	0.375
Net profit to sales	0.615	0.843	.391
Return on Capital employed	0.69	0.727	.391
Earnings per share	1.05	0.22	.375

*1 computed values

From the above, we can accept the null hypothesis for performance variables, 'Sales Growth' and 'Earnings per share'. However, variables, 'Net profit to sales', and 'Return on capital employed' have a computed value higher than the Table value. This suggests that the null hypothesis can be rejected for these two variables.

The one tailed values of K were computed as follows:

	K
Sales Growth	1.03
Net Profit to Sales	0.13
Return on Capital Employed	0.67
Earnings per Share	0.75

All of these values are not significant at the 5% level, ($K > 1.22$). This suggests that the means of the sub groups are not stochastically larger or smaller in one population compared to the other.

Comment

The Kilmogorov-Smirnoff analysis suggests that in the case of variables 'Sales Growth' and 'Earnings per Share', the sub group samples come from different populations. This supports the hypothesis. However, the hypothesis goes on to state that the marketing oriented sub-group should have a higher mean value, for each performance measure, than the non-marketing oriented sub-group. The results of the one tailed test do not support the hypothesis.

Summary

1. The Peer Group judgements represent a reasonable large sample. Moreover, the majority (i.e. 93 respondents) gave a judgement on each sample company. This provides a large enough group to meet the need for a broad based group of judges.
2. There is also evidence that the judges used the same criterion to judge the companies i.e. definition of marketing (see Table 18).

3. There appears to be a reasonably high level of concordance between the judges which reinforces point 2.
4. The judges answer to Question F., (Table 18) provided the cut off point to dichotomise the sample, ie. Outstanding, Above Average, and Average = marketing; Below Average and Poor = non-marketing.
5. A review of the crosstabulations of company performance measure by sub-group, (see Cross Tabulations - 13, 14, 15 and 16), suggests a partial satisfaction of the hypothesis.
6. The Contingency Coefficient results suggest a strong relationship based on Assumption One. However, under this assumption, the calculation of Chi. Square is under question because of the minimum cell frequency. However, under the Assumption Two, there is evidence that there is a relationship between a marketing oriented and high performance on the measure of Return on Capital Employed. This is also statistically significant. Moreover, this measure is probably the single most important measure of performance.
7. Also, the results of the K-S test point to two populations, especially in the case of Net Profit to Sales, and Return on Capital Employed. However, the one tailed test does not suggest that the means of either group is stochastically larger or smaller than the other.

CHAPTER SEVEN

Conclusions and Recommendations

7.1. Introduction

This Chapter is organised as follows:

- 7.2. The testing of the hypothesis by this research.
- 7.3. Comparison of this research with the studies reviewed in Chapter Three.
- 7.4. A review of the weaknesses of this study.
- 7.5. Final conclusions.
- 7.6. Recommendations for further research in this area.
- 7.7. Recommendations to management in the U.K. Construction Industry.

7.2. The testing of the hypothesis by this research.

The hypothesis stated in Chapter One (P.15), was:

Companies who adopt formally developed marketing strategies will, when compared with similar non-marketing companies operating in the same market, perform at a higher level in terms of the major performance measures.

A review of Cross Tabulations 13 to 16 suggests:-

- i. The 'marketers' significantly out-performed the 'non-marketers' in terms of sales growth.
- ii. The 'marketers' marginally out-performed the 'non-marketers' in terms of net profit to sales.

- iii. The 'non-marketers' marginally out-performed the 'marketers' in terms of Return on Capital Employed.
- iv. The 'marketers' significantly out-performed the 'non-marketers' in terms of earnings per share.

The results of the Contingency Coefficient (based on Assumption Two) supports the hypothesis on the measure of Return on Capital Employed. This is an important result and suggests a positive relationship between a marketing orientation and Return on Capital Employed.

The results of the K-S two sample (two tailed) test suggest that the sample groups - 'marketers' and 'non-marketers', were drawn from different populations.

But the one tailed test results are not significant. Whilst there is evidence in the research to support the hypothesis, the results of this test must lead to the view that the research only partially supports the hypothesis and that more research is needed.

7.3. Comparison of this research with the studies reviewed in Chapter Two.

7.3.1 Thune and House (1970) used a similar methodology i.e. the establishment of two groups - (see pp. 65-71). At the core of their study is the comparison of Formal and Informal Planners during the same period, expressed as an average percentage increase over the period; (Table 3).

Their study looked at performance in terms of change over the period, i.e. average percentage increase during the period. However, only on the Sales Growth measure is this study directly comparable with Thune and House.

Table 39

Comparison of the findings of this study with Thune & House

Sales Growth

Thune & House #1		This study #2	
Formal Planners	Informal Planners	Marketing oriented	Non-marketing oriented
+75%	+53%	+16.9%	+12.3

Source - #1 Table 3.

#2 Appendix 8.

Whilst the overall level of performance is higher in Thune & House's group, (due to the nature of the industries they studied), the difference between the two groups, in each study, is similar.

The formal planners performed some 41% above the informal planners; $(100 \div 53\% \times (75\% - 53\%))$.

The marketing oriented companies performed 37% above the non-marketing companies $(100 \div 12.3\% \times (16.9\% - 12.3\%))$.

It must be stressed that the descriptions of the sub groups are not identical. However, a major component of a marketing orientation is formal planning (see tables 9 and 10, pages 82 & 83, respectively).

7.3.2 The PIMS study can also be compared with this study - on the basis of Return on Investment, (broadly comparable with Return on Capital Employed). Market share can be a function of a marketing orientation, and the split of 'low/high' market share can be aligned with the non-marketing/marketing split of this study. This has been done in Table 40.

Table 40

Comparison of the findings of this study with that of the PIMS study.

Return on Investment (Return on Capital Employed)

	PIMS #1		This study #2	
	Low Mkt. Share	High Mkt. Share	Marketers	Non-Marketers
R.O.I.	+9.6%	+30.2%	+27.0	+27.34

Source - #1 Table 5.

#2 Drawn from computer analysis see Appendix 9.

PIMS statistics are an average for the companies in each group.

Similarly, the statistics from this study, presented in Table 40,

are an average for each group over the three year period. Clearly there is a problem of comparing the groups from each study and 'low market share' has been taken as a 'non-marketing' company and 'high market share' as a 'marketing' company. However, the results of this study are out of step with the results of PIMS.

7.3.3 There are two aspects of the work of Hooley, West & Lynch (1984) that are comparable with this study.

Firstly, there is a marked difference in the proportions of each sample per group, (i.e. marketing/non-marketing). Some 60% of their sample was 'marketing oriented'; (see Table 10); whereas only 32% of the sample in this study was classified as 'marketing oriented'.

Secondly, marketing orientation related to company performance; (see Table 8). The results of this study show that a higher proportion of the "Marketing Orientation" sub-group (66.9%) had a High net profit, whereas a low proportion of the 'Production orientation' sub group (10.3%) had high net profit. The best comparison of these results with this study is to look at Net Profit to Sales % (average) for the period. The results of the cross tabulation are presented below in frequency/percentage terms.

In Table 41, the non-marketing oriented group has double the percentage of 'high profit' performers compared to the marketing oriented group; i.e. 20%; 9%, respectively.

Table 41

Net profit to sales average for period

Frequencies and Percentages

Performance Bands	Marketing oriented		Non-marketing oriented	
	Freq.	%	Freq.	%
Negative profit	-	-	-	-
Low profit 0 - 3.99%	9	91	13	64
Average profit 4.00% - 6.00%	-	-	4	16
High profit 6.01% +	2	9	5	20

Source: Cross tab. 14 (p. 162)

7.3.4 Looking at the comparisons above, this study seems to support the findings of Thune and House in terms of Sales Growth. However, there is a marked difference between this study and PIMS. In this study there was virtually no difference in Return on Capital Employed for the two sub groups. Finally, the results compared with Hooley, West and Lynch, on the measure of net profit are inverted. The non-marketing oriented firms had a larger proportion of their sub group in the higher profit band.

7.4. A review of the weaknesses of this study

A number of areas are considered to be weaknesses of this study.

Probably the most important are:

7.4.1 The assumptions - The central assumption (as stated on p.34) of ceteris paribus - "all other things being equal", must be questioned. Whilst many issues like economies of scale, quality of staff and labour, availability of finance and other non-marketing issues can be seen to be broadly similar in the sample group, there must still exist the question of whether the study was comparing the firms only in terms of their adoption of the marketing orientation.

7.4.2 The hypothesis - The hypothesis attempts to move forward from the foundation of the central assumption. Perhaps the hypothesis should look at the nature of management practices rather than a marketing orientation. The work of Herbert (1984) and Hartley (1985) point to success being linked to a managerial style. Thune and House (1970) did suggest that formal planning was a manifestation of good management. Implicit in this is that good managers consider each aspect of the management of the business with the same approach. Manpower planning, their profit forecasting, cash flow management, and operations strategy would be as well managed as marketing strategy. Quite simply, they would integrate business activities to achieve corporate objectives.

Norburn (1986) identified several characteristics of Directors that were linked with the performance of the industry their companies operated in. These characteristics being broken down into economic environment, domestic environment and self concept.

7.4.3 The choice of performance measures - as with other studies in this area, well accepted measures of performance were used, i.e. profit and sales growth based measures. Certainly, profit performance is a major part of a public limited company's corporate objectives. However, if the companies in the sample had widely differing corporate objectives then the use of these performance measures would have been inappropriate.

7.4.4 The method of study - The method of study has been reviewed above, (pp. 105-110). A direct self completion questionnaire was favoured, (in line with Thune & House (1970). However, the application of such a questionnaire was not successful. With hindsight, this method of study might still be favoured.

7.4.5 The results - The results of this study are inconclusive. In the simple cross tabulations, (crosstabs. 13-16, pp. 161-164) the marketing oriented group outperformed the non-marketing oriented group on performance measures SALES GROWTH and EARNINGS PER SHARE. However, on the other measures - NET PROFIT TO SALES and RETURN ON CAPITAL EMPLOYED the results were inconclusive. However, the Contingency Coefficient value, (Assumption Two) for RETURN ON CAPITAL EMPLOYED, does support the hypothesis. Moreover, the

K-S two sample (2 tailed) test (presented in Table 34) suggests that in the performance measures, NET PROFIT TO SALES and RETURN ON CAPITAL EMPLOYED, the samples are drawn from different populations. However, the results of the ONE tailed test are not significant.

Comparison with other studies, (albeit there are problems of definition and 'like with like' comparisons), suggests that this research does support earlier work to a limited degree.

7.5. Final conclusions

Good management practice is an interactive process. The role of academic research in the area of management seems to be two fold. Firstly to identify those management practices that are "good" and to conceptualise them so that they may be transferred to other management situations. Secondly, to act in the very vanguard of management development to suggest new tools, techniques and approaches to better aid the practising manager.

This study falls in the former group and has concentrated on the transfer of good industrial marketing from industry generally, (via theory), to the U.K. Construction Industry. The central issue of this study, therefore, is to introduce to the industry concepts that may be modified and repeated until they provide a basis for good management practice in the sphere of marketing.

The research is specific to the Construction Industry and although the results are inconclusive there is partial evidence to support the hypothesis.

7.6. Recommendations for further research in this area

There seems to be a need for the study of the relationship between management activity and company performance. Also, there is a body of impressive research to suggest that such a relationship does exist.

There are two approaches that could be considered. Firstly, the self completion questionnaire. There are two research strategies worth considering:

- a) To use a questionnaire like the one presented in App. 2, (i.e. combining information to classify the company with performance information from the company), but to ensure a significantly higher response rate. Crozier (1982) offers good advice on this issue. It may be worth involving institutions that have an influence on the respondents' propensity to contribute. Institutions such as The Chartered Institute of Building may be prepared to act as 'sponsors' to create a more favourable image for the research.
- b) The alternative seems to be to use the excellent work of Savory Milln, (which is published annually), and a self completion questionnaire to the sample companies only concerned with Section C of the original questionnaire (App. 2). This would provide the necessary information to conduct a sound classification of the companies. The analysis could then follow similar lines to this study.

Secondly, there seems to be an opportunity for using an observation approach in this sort of study. Bell (1981) used a structured face-to-face interview format in his study. Certainly, it seems reasonable to approach a number of companies to assess their willingness to participate in such a study. The methodology may involve regular meetings with key executives, tracking studies of strategy development, observation of management styles to assess degree of marketing orientation, and analysis of performance data, specific to trading.

7.7. Recommendations to management in the U.K. Construction Industry

Chapter Four identified several authors who were advocating the adoption of the marketing concept in the U.K. Construction Industry. It was interesting to note that none of the Peer group respondents felt that the U.K. Construction Industry was "Outstanding" in its adoption of the marketing concept compared with capital goods industries generally.

Furthermore, nearly half (48.2%) of the respondents considered their industry to be "below average" on this parameter, (see table 23).

However, the respondents were more favourably disposed to their own companies than the industry as a whole, (see table 26).

Certainly, there is a small number of outstanding marketing oriented companies in the U.K. Construction Industry. This statement is made on the basis of the researcher's knowledge of the

sample companies and the application of the 'ideal' type developed in Fig. 7.

It is worth elaborating on this ideal type here.

1. Formal marketing planning - given the evidence for its relevance to performance it seems important that companies, in any industry, are clearly aware of their strengths and weaknesses and are able to identify and monitor opportunities and threats in the environment.
2. Marketing research - the Construction Industry presents a complex interaction of different decision making units - a D.M.U. in the client company, a D.M.U. in the architect's firm and a D.M.U. in the Quantity Surveyor's firm. An understanding of this interaction seems to be central to profitable decision making in this industry.

Furthermore, Main Contractors often use the competitive bidding situation as a reason for not adopting the marketing concept. They argue that there is little that can be done prior to receipt of the Tender documents. Research presented in Chapter Two offers evidence to suggest that a strategist with a clear understanding of the perceived needs of the members of the D.M.U. and the interrelationships of the D.M.U. (provided by research), can better communicate with the D.M.U. For the Construction Industry, this suggests that research can provide information regarding the hierarchy of needs of the D.M.U., and

can allow the development of non-price features in the competitive offering.

3. Relevance of marketing to the firm - at its simplest level marketing seeks to match a firm's differential advantage with a perceived need of a particular market segment or segments. The profit implications seem clear - if one plays off one's strengths one has an operational advantage and if customers perceive one's offering to be the best satisfaction of their needs, one has a market place advantage.
4. Future relevance - all markets are dynamic - there are many changes occurring in the U.K. Construction Industry - a levelling of the trade cycle, increased emphasis on refurbishment at the expense of new build and changes in methods of placing business. A marketing orientation is concerned with such dynamics and consequently is of particular relevance to the future of firms in the industry.
5. Goals of sales people - salespersons, pre-contract negotiators etc., have a major role in the marketing process. One could say that on occasions, a Main Contractor has the perfect marketing opportunity - one, easily identifiable customer to whom a unique marketing mix can be presented. Salespersons are central to the understanding the D.M.U. and advising Management on appropriate strategies and tactics and implementation.
6. Individuals involved in marketing/selling - There is a need to develop a marketing orientation throughout the company. A site

agent is in a marketing role when he meets with the architect on site. Many expensive advertising campaigns have failed because the staff of the firm either were not aware, or did not agree with the message.

7. Relationship between marketing and pricing. - Pricing is a central element of the marketing mix. Unfortunately, many companies, not only in the Construction Industry, confuse Costing with Pricing. During the research there was anecdotal evidence of a particular construction firm adopting value pricing in the office refurbishment segment. This company allowed the estimating (costing) system to operate in the traditional way but gave significant effort to assessing the client's needs, the competitive offerings and their relative competitive position vis à vis the client's needs. This is evidence that the Industry can break away from cost plus pricing.
8. Advertising - A review of advertising of Construction Industry companies in national press and trade press was conducted for a period of 6 months. Advertisements for private house developers were ignored. The majority of advertisements fell into one of three categories.
 - a) General corporate image advertising.
 - b) Announcement of awarded/completed contracts.
 - c) Announcement of results.

A minority of companies developed advertisements with message platforms that seemed more appropriate to the perceived needs of the target audience. Two examples are presented in App. 10a and 10b. Incidentally, both companies were high scorers in the Peer group evaluations, (see Tables 21 and 22). In Lovell's advertisement the message sets out to identify the audience's perception of the weaknesses the Construction Industry - delay, inefficiency, cost increases and adversarial relationships. They offer a differential advantage based on a new approach to the relationship of the members of the building team - Client, Architect and Main Contractor. Also, the company uses an innovative approach to moving prospects along the attitudinal chain from unawareness to action. Interested potential clients are offered a free video cassette. This seems to be an appropriate way of communicating the intangible benefits of the company's offering.

Taylor Woodrow use the client's need to have a building operational, (and hence contributing to profit), as soon as possible. They use a recent, prestigious contract as a way of illustrating the benefits that derive from their skill as project managers - i.e. an intangible benefit.

9. Other promotional areas - much of the non-marketing oriented companies' activity seems to be centred on 'below the line' promotional expenditure. There is a place for such activity but in the context of a properly constituted strategy.

10. Public relations - despite the fact that the Construction Industry supplies, in the majority of cases, very tangible goods, it really sells an intangible service to its customers. Public relations has a major role in the establishment of a firm's differential advantage in the minds of potential and existing customers.

SUMMARY

The method of operation of the Construction Industry has evolved over the last 150 years. Of all the capital goods industries it is easy to understand why this industry is so deeply rooted in the production orientation. The dynamics of the modern environment must act as an agent of change in the industry. The adoption of the marketing concept and the development of a marketing orientation are significantly more fundamental than making cosmetic changes to the structure of the company. It requires much effort in terms of developing, not only new systems and methods of operation but a new business philosophy.

Clearly, for senior management to undertake such a task, there must be the expectation of appropriate rewards. This study goes some way to suggesting that the adoption of a marketing orientation offers practising firms a real return on effort.

List of Appendices

1. The results of Bell's (1981) research.
2. First Questionnaire (mailed 1/2/84).
3. Covering letter (1/2/84).
4. Follow up letter.
5. Results of analysis of pilot study.
6. Main Questionnaire.
7. Covering letter to main questionnaire.
8. Average Sales Growth for each group.
9. Average Return on Capital Employed for each group.
- 10a Specimen One - advertisement by Lovell Ltd.
- 10b Specimen Two - advertisement by Taylor Woodrow Ltd.

THE RESULTS OF BELL'S (1981) RESEARCH

RESULTS OF THE INTERVIEWS

As the questionnaire was in the form of a structured interview, the answers obtained often did not lend themselves to presentation in a tabular form. In preparing Table III it was often necessary to correct a long involved answer into the essential facts. Great care was taken to ensure that none of the answers were misconstrued. The results presented in Table III are to be read in conjunction with the section on firm-by-firm factors, which outlines individual factors affecting the companies.

Table III

QUESTIONNAIRE	CONTRACTOR A	CONTRACTOR B	CONTRACTOR C	CONTRACTOR D	CONTRACTOR E	CONTRACTOR F	CONTRACTOR G	CONTRACTOR H
<p>SECTION 1 - DEFINITION</p> <p>A 1) What would you say is a good definition of marketing for the construction industry?</p> <p>A 2) How do the following definitions (see Appendix page 1) compare with your ideas of marketing?</p>	<p>None</p> <p>Number three is the closest to our ideas</p>	<p>None</p> <p>Number three is the closest to our ideas</p>	<p>None</p> <p>Number three is the closest</p>	<p>None</p> <p>Number three is very close to our ideas</p>	<p>None</p> <p>Number three is the closest</p>	<p>None</p> <p>Number three is the closest</p>	<p>None</p> <p>Number three is very close to our ideas</p>	<p>Selection of the market and then persuasion of the business out of that market into your direction</p> <p>Number three is the closest</p>
<p>SECTION 2 - HOW DOES MARKETING FIT INTO A CONSTRUCTION FIRMS ORGANIZATION</p> <p>A) Does your firm have Marketing executive/ executive?</p> <p>1) How are they arranged in the firm?</p> <p>2) What experience do you look for in new marketing staff?</p> <p>3) Have you a written job specification for Marketing executives? (if so can I have a copy of it?)</p> <p>If not then</p> <p>1) Who carries out the main marketing functions in your firm?</p> <p>2) Is there a need for a specialized marketing man in your firm?</p> <p>3) How is complacency avoided with no marketing staff?</p> <p>B) 1) Could you draw a management chart to show the interrelation of your marketing staff with the other management staff?</p> <p>B of D = Board of Directors RMS = Regional Managing Director RMM = Regional Marketing Man CE = Chief Engineer CON T = Construction Team PR = Public Relations Dept. GMM = Group Marketing Manager MM = Marketing Man CACC = Chief Accountant</p>	<p>Yes</p> <p>We have a group marketing man and one man in each region</p> <p>A person who knows the region and has contacts and could influence clients</p> <p>No</p> <p>Yes (copy supplied)</p> <p>MAN. DIR. MIM CE PM CACC PR (HQ)</p>	<p>Yes</p> <p>One Marketing Director</p> <p>A man aged 35-40 with stature presents, who knows the area and has contacts in the industry</p> <p>Yes (copy supplied)</p> <p>MAN. DIR. MIM CE PM CACC PR (HQ)</p>	<p>Yes</p> <p>We have a group marketing man sometimes with assistants in each region</p> <p>The best are internally reared people who know our firm and the regional market place</p> <p>Yes (copy refused)</p> <p>B of D RMD OTHERS CON T CE Buying MM Dept.</p>	<p>Yes</p> <p>Individual Marketing Director only</p> <p>We do not need any more pure marketing men</p> <p>Yes (copy refused)</p> <p>B of D RMD OTHERS CON T CE Buying MM Dept.</p>	<p>No</p> <p>The Managing Director Probably as a Clerk No place for complacency</p> <p>MAN. DIR. 80% CON T Activities 20% Marketing Activities</p>	<p>Yes</p> <p>Marketing Directors at group and four marketing men to cover the regions</p> <p>Someone with contacts in the area that you want to work</p> <p>No</p> <p>B of D RMD GMM CON T CE RMM</p>	<p>All five Directors No need at all Complacency is not possible</p> <p>B of D CON T Activities Marketing Activities (Very small amount)</p>	<p>Yes</p> <p>No group marketing man but three, two or one marketing people in each region</p> <p>A person with knowledge of the region and regional contacts and an overall knowledge of construction</p> <p>Yes (copy supplied)</p> <p>B of D RMD RMD Other Department Heads RMM</p>
<p>C) 1) Should all marketing functions be consolidated under one Director?</p> <p>2) Comment on the feasibility of the following -</p> <p>MARKETING MAN SALES MARKET RESEARCH STOCKS DELIVERY PROMOTION R & D TRANSPORT</p> <p>3) To whom initially will the marketing information be given?</p> <p>D) 1) How independent are your marketing staff? a) from site b) from other departments</p> <p>2) Do you consider that marketing is in fact a corporate affair involving all departments? or is your firm's approach to marketing an ENTIRE FIRM approach where all levels of staff realize the need to satisfy the customer needs at a profit?</p>	<p>Most definitely</p> <p>Stocks, delivery and transport are not of the marketing function. Research and Development is a separate dept.</p> <p>The Regional Director and Estimators</p> <p>Very independent</p> <p>Slightly independent</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A, with market research only after Board decision</p> <p>The Board of Directors, Chief Estimator, Projects Manager and Chief Accountant</p> <p>We are integrated with both site and other departments</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A</p> <p>All Regional Departments and Regional Director</p> <p>Very independent</p> <p>Integrated in policy</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A but only advisory role to Research and Development</p> <p>All senior staff and Estimators</p> <p>Integrated with both site and other departments</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A but Research and Development not a separate section</p> <p>All senior staff</p> <p>Slightly independent</p> <p>Integrated</p> <p>Yes definitely</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A</p> <p>Managing Director, Regional Director and Estimators</p> <p>Slightly independent</p> <p>Integrated</p> <p>Yes</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A but no separate Research and Development department</p> <p>All senior staff</p> <p>Completely integrated with site and other departments</p> <p>No</p> <p>Yes</p>	<p>Yes</p> <p>Ditto Contractor A</p> <p>All senior staff</p> <p>Integrated</p> <p>Integrated</p> <p>Yes occasionally</p> <p>Yes</p>

QUESTIONNAIRE	CONTRACTOR A	CONTRACTOR B	CONTRACTOR C	CONTRACTOR D	CONTRACTOR E	CONTRACTOR F	CONTRACTOR G	CONTRACTOR H
SECTION 7 - RECORDS AND USE OF INFORMATION A) 1) How do you record your marketing information? 2) How do you ensure that records are used correctly? B) How do you ensure that records are kept up to date?	Central company system with good communication You cannot Communications meetings	Client and prospect files records of jobs applied for and full details of results You cannot Updated each 14 days	Computer files on clients etc. Regional files also used You cannot Constant usage	Dead and ongoing job files and client and contact files You cannot Personal updating	Ditto Contractor B suit planning, application files By personal contact Constant usage	Filed report on personal market forecasts and contacts You cannot Updated each 14 days	No client records only full records of tenders and results Meetings and talking Updating at job completion	Client files and full records of tenders and results You cannot Contract procedure
SECTION 8 - NEW PRODUCTS AND SYSTEMS A) 1) Does your firm look into Research and Development? 2) How do you ensure that sufficient research has been carried out on new products or building methods and systems? B) How does Research and Development and Marketing combine in your firm?	Yes, large separate section Obtain a complete study both practical and theoretical The R & D section look at everything and then marketing men read the reports	Yes Theoretical checks when necessary The marketing function determines the R & D undertaken	Yes, large separate section Ditto Contractor A Ditto Contractor A	Not very much Theoretical checks only Ditto Contractor B	Not very much Theoretical checks only The two functions do not combine at all	Not very much Theoretical checks only The R & D look at what they want and if necessary report findings to us	Yes, but not separate section A complete theoretical check Ditto Contractor B	Yes, a large separate section Ditto Contractor A The R & D has an important bearing on the marketing section
SECTION 9 - ADVERTISING AND IMAGE BUILDING A) Does your firm relate much importance to: 1) image building 2) advertising B) How is advertising dealt with in your firm? C) Do you think the following are important: 1) Press advertisements for labour? 2) Colour schemes for cars, huts etc? 3) Newspaper and logo? 4) Trade journals and sales brochures? 5) Topping out ceremonies? 6) Public relations if firms, neat sites, training schemes, lectures etc? D) How much is spent on advertising in your firm?	Yes Yes National advertising at HQ local work at regions Yes Yes Yes Yes Yes Especially important Small amount compared to turnover	Yes Not too much All advertising and PR work dealt with via London experts Not too important Yes Yes Yes Yes Yes Yes Very small amount compared to turnover	Yes Yes Separate section of experts employed in London although local work regionally Depends on location Yes Yes Yes Yes Yes Yes An average amount for the industry	Yes Not adequate Ditto Contractor A Yes Yes Yes Yes Not important Yes Yes No comment	Yes Not much Each region deals with their own, HQ deals with group advertising Yes Yes Yes Not important Yes Yes About 0.1% of turnover	No need Not much We have group advertising at HQ and Marketing men do regional stuff Yes Yes Yes Yes Yes Especially important £20,000 relative to £100M turnover	Very little, not needed Very little HQ deals with it via five Directors Absolutely of no importance Yes Yes Yes Yes Yes Yes Ditto Contractor A	Yes Not much Outside agency for group advertising, regions do the local work Yes Yes Yes Yes Yes Yes Ditto Contractor A
SECTION 10 - GENERAL A) How adaptable are your firm's policies to changes in market conditions? B) How do you evaluate RISK in marketing? C) Does marketing help to reduce risks in construction? D) Should estimating and tendering be controlled by marketing? E) How does one avoid staying too long in a declining and unprofitable situation? F) Do you try and develop the client's interest in build? G) What is the quality of your after-sales policy? H) Does your firm have any form of specialization or does it try and keep a wide front? I) What market areas exist in your locality? J) Has your firm developed any areas where skill and expertise gained in building has given you a lead? K) Does marketing affect the status quo or does it purely lead all contractors to chase each other up the wrong pole?	Very adaptable No comment No No they should run together Forecasting and planning ahead and contacts You cannot Good We have the ability to do both All sectors of market Yes numerous areas It is a question of finding the right poles	It depends on resources that change requires Risk is a tendering problem not marketing No Yes but with consultation with department heads Ditto Contractor A You cannot Good (ongoing work) Yes specialization in housing Ditto Contractor A No comment No comment	Exceptionally rapid The site construction has risks not marketing No Not controlled but taking advice from Ditto Contractor A You cannot Not good enough Ditto Contractor A Ditto Contractor A Yes in building materials No comment	Very adaptable No comment No Not controlled but integrated together Ditto Contractor A You cannot Quite good Makes use of skills required Ditto Contractor A Yes in the joinery field No comment	Not very adaptable due to staff requirements Ditto Contractor B No Ditto Contractor A Ditto Contractor A You cannot Very good No comment Ditto Contractor A Presently no One can be overbold on what marketing can do	Not very adaptable due to structure of firm Ditto Contractor B No No only advisory role Ditto Contractor A You cannot Poor as none exists Specialize in large scale construction Ditto Contractor A No No comment	Very adaptable There is no risk in marketing No No marketing is a consideration of tendering Ditto Contractor A You cannot Good Specialized in quality work Ditto Contractor A Yes in the joinery field No comment	Very adaptable Ditto Contractor G No Ditto Contractor A Ditto Contractor A You cannot Good We like to keep a wide front Ditto Contractor A Yes in the joinery field No comment

Appendix 2

THE POLYTECHNIC OF WALES Politechnig Cymru

QUESTIONNAIRE

. As you will appreciate the focus of the research is an understanding of how major companies, such as yours, operate in the U.K. Construction Industry. Your overseas activities are NOT part of this research brief.

We appreciate that your activity in the Construction Industry may be controlled through subsidiaries which can act independently. If this is the case, we can forward, on request, further questionnaires to be completed by each subsidiary company or division.

To reduce the time involved in completing the questionnaire we have divided it into three distinct sections:

- (A) Company Activity
- (B) Accounting Data
- (C) General Corporate Activity

This will allow you to delegate each part to a relevant executive in your organisation.

This research will hopefully help Management by providing an insight into effective managerial practices. Without your support the research cannot be carried out. Thank you for your help.

Please return all three sections in the envelope provided. Any queries should be made to the address below.

Department of Business and Administrative Studies
The Polytechnic of Wales
Pontypridd
Mid Glamorgan
CF37 1DL

Telephone (0443) 405133 ext. 2318

RESEARCHER: Eric Davies
TUTOR: B.J. Davies

INFORMATION FOR RESPONDENTS

1. DEFINITIONS

- (a) Type of Work, e.g. "Public Sector New Housing" are based on the classification used by the Central Statistical Office in the compilation of the Housing and Construction Statistics.
- (b) Value of Work done is defined as that work which is claimed for during the period and all work in progress remaining unclaimed during the period.
- (c) Bidding Systems referred to are defined as follows:
- Open Tender: Used by Public Authorities, the scheme is advertised and any organisation may quote, against a bill of quantities, prepared by the Quantity Surveyor from the Architect's plans.
- Selective Tender: A short list of organisations is compiled, based on a set of criteria developed by the client and his advisers. Again, a standard bill is used.
- Negotiation: Here the Selected Contractor enters the pre-contract activity at commencement of the project and becomes a part of the 'building team', i.e. Architect, Quantity Surveyor and Contractor. The rates are then negotiated during the execution of the contract.
- Fee Scheme: In this case the basic cost of the scheme is estimated by the client's Quantity Surveyor and the Contractor sets a fee as an addition, either, a lump sum, or percentage.
- Two Stage Contract: In this case, the Contractor is asked to provide a Schedule of Rates, based on a brief outline of the project. In the second stage, the client can then ask the Contractor to 'firm' up his rates, based on a more detailed specification.
- Design and Build: In this case, the contractor takes on the total responsibility for the project. Included here, are standard solutions such as modular building.
- (d) Market Research is defined as the organised gathering of information relevant to reducing the degree of uncertainty in Marketing decisions.
- (e) Formal Marketing Planning is defined as a management process which institutionalises procedures, leading to the explicit statement of objectives, strategies and programmes for marketing activities and the provision for the subsequent execution, review and control of such activity.

(f) Accounting-Terms

(i) Net Trading Profit: Profits arising from trading operations, after deducting depreciation, but before charging interest or crediting investment or other income. Whenever possible, exceptional items such as currency and stock profits/losses, provisions for contingencies, etc. should be excluded.

(ii) Net Capital Employed: Net fixed assets plus net current assets. However, cash investments and other assets not used in trading operations should be excluded. Also, intangibles, such as goodwill should be excluded. Overdrafts and other borrowings (including acceptance of credits) should be excluded from the current liabilities. Net Capital Employed is calculated at the end of each relevant year.

(iii) Earnings per Share: Should be calculated on the undiluted ordinary share capital, and the usual adjustments should be made for scrip and rights issues.

2. COMPLETING THE QUESTIONNAIRE

(a) There are three distinct parts to the questionnaire, but one respondent may complete the whole if he/she has access to all the information. Alternatively, the various parts can be completed by relevant departments.

(b) The questions are set in a sequence within each section, so please start at the beginning of the section and answer those questions which apply to your company's circumstances.

(c) The method of recording your answer uses one of the following formats:

(i) Tick (✓) the appropriate box.

(ii) Write your answer in the space provided (continue on a separate sheet if necessary).

(iii) Circle the letter, figure or word which corresponds most closely to the answer of your choice.

Examples: (YES) NO; 1 2 (3) 4 5

QUESTIONNAIRE

QUESTION
NUMBER

PART A - COMPANY ACTIVITY

A.1 Is any member company of your group, active in PUBLIC SECTOR: NEW HOUSING CONSTRUCTION?

YES NO

Please Circle the Appropriate Answer

If YES go to question A.1a

If NO go to question A.2

A.1a This question concerns your group's value of work done in construction.

About what percentage of real value came from public sector: new housing construction, in the years 1977 and 1982?

	0-5%	6-10%	11-20%	21-50%	51+%
1977					
1982					

Please Tick (✓) the Appropriate Boxes

A.2 Is any member company of your group, active in PRIVATE SECTOR: NEW HOUSING CONSTRUCTION?

YES NO

If YES go to A.2a

If NO go to A.3

A.2a This question concerns your group's value of work done in construction.

About what percentage of real value came from private sector: new housing construction in the years 1977 and 1982?

	0-5%	6-10%	11-20%	21-50%	51+%
1977					
1982					

A.3 Is any member company of your group, active in construction for/of GAS, ELECTRICITY, COAL MINING, ROADS, RAILWAYS, AIR TRANSPORT, HARBOURS AND WATERWAYS?

YES NO

If YES go to A.3a
If NO go to A.4

A.3a This question concerns your group's value of work done in construction.

About what percentage of real value came from GAS, ELECTRICITY, COAL MINING, ROADS, RAILWAYS, AIR TRANSPORT, HARBOURS AND WATERWAYS?

	0-5%	6-10%	11-20%	21-50%	51+%
1977					
1982					

A.4 Is any member company of your group active in construction for/of EDUCATION, HEALTH, PUBLIC SECTOR OFFICES AND FACTORIES?

YES NO

If YES go to A.4a
If NO go to A.5

A.4a This question concerns your group's value of work done in construction.

About what percentage of real value came from EDUCATION, HEALTH, PUBLIC SECTOR OFFICES AND FACTORIES?

	0-5%	6-10%	11-20%	21-50%	51+%
1977					
1982					

(Continues)

A.5 Is any member company of your group active in PRIVATE SECTOR COMMERCIAL AND/OR INDUSTRIAL CONSTRUCTION?

YES NO

If YES go to A.5a
If NO go to A.6

A.5a This question concerns your group's value of work done in construction.

About what percentage of real value came from PRIVATE SECTOR COMMERCIAL AND/OR INDUSTRIAL PROPERTY CONSTRUCTION?

	0-5%	6-10%	11-20%	21-50%	51+%
1977					
1982					

A.6 Is there a further area of construction activity, not given above, that accounts for over 20% of your group's value of work done?

YES NO

If YES go to A.6a
If NO go to A.7

A.6a Please state the further area/s of activity and give approximate percentages of the value of work done in the U.K.

%VALUE OF WORK DONE		
Further Area/s of Activity (Please State)	1977	1982
	%	%
	%	%
	%	%

(Continues)

A.7 This question is concerned with the main methods of obtaining business in the industry. These main methods are listed below. Please estimate the percentage of your group's value of work done by each method. Your answers should relate to 1982 for all categories of work.

	Percentage Value Work Done 1982
Open Tender	%
Selective Tender	%
Negotiation	%
Fee Scheme	%
Two Stage Contract	%
Design and Build	%
Other (please state)	%
	100%

THANK YOU FOR COMPLETING SECTION A.
SECTION B COMMENCES ON A SEPARATE SHEET.

QUESTIONNAIRE

QUESTION
NUMBER

PART B - ACCOUNTING DATA

B.1 Please state your group's value of work done in the U.K. Construction Industry in your accounting year 1977.

£ m

1977

B.2 Please give your group's value of work done in the U.K. Construction Industry in your accounting year 1982.

£ m

1982

B.3 Please give your group's NET TRADING PROFIT for the years 1977 and 1982.

	£ m
1977	
1982	

B.4 Please state your NET CAPITAL EMPLOYED for the years 1977 and 1982.

	£ m
1977	
1982	

B.5 State please your EARNINGS PER SHARE for years 1977 and 1982.

	Pence
1977	
1982	

B.6 Please state the number of personnel in your organisation, whose prime role is a marketing one (i.e. marketing research, promotion, client relations - that is, those people predominantly involved at pre-contract stage, but excluding estimators).

	No. Employed
1977	
1982	

B.7 Does the estimator have a marketing role?

YES NO

B.8 Please state the main reasons for your answer to question B7.

B.9 In the following question the terms 'promotion' and 'advertising' are defined as follows:-

Promotions - exhibitions, seminars, films, company livery, site boarding, sales brochures, promotional gifts.

Advertising - trade press, national press, television.

About what proportion of your sales revenue was spent on Advertising and Promotions in 1977 and 1982?

	1977	1982
0 to under 0.5%		
0.5% to under 1.0%		
1.0% to under 3.0%		
3.0% to under 5 %		
5%+		

E N D

SECTION B IS NOW COMPLETED. THANK YOU FOR COMPLETING THIS SECTION.
SECTION C COMMENCES ON A SEPARATE SHEET.

QUESTIONNAIRE

QUESTION
NUMBER

PART C - GENERAL CORPORATE ACTIVITY

C.1 Does your company operate a Formal Marketing Planning system as defined in the information for respondents section?

YES NO

Please Circle the Appropriate Answer

If YES please go to C.1a
If NO please go to C.2

C.1a How long has this system been in operation?

less than THREE years - A

THREE or more years
but less than FIVE
years - B

FIVE or more years - C

C.2 Does the Sales/Marketing departments influence the mark up of an estimate in any of the following ways:-

"the marketing department provides market ruling price and therefore sets limit to mark up"	YES	NO
---	-----	----

"the marketing department projects probability of success at various bid levels"	YES	NO
--	-----	----

"other forms of influence": _____
(please state) _____

C.3 Does your company have an "in house" market research department?

YES NO

If YES please go to C.3a
If NO please go to C.3b

C.3a How long has this department been in existence?

Less than THREE years - A

THREE or more years
but less than FIVE - B

FIVE or more years - C

C.3b Has any company in your group commissioned an outside agency or organisation to conduct market research during:

1977-82 YES NO

1971-76 YES NO

C.3c Is it part of the role of market research in your company to:

"collect published data
regarding market trends
for forecasting" YES NO

and

"to use desk and field
research to develop an
understanding of client
buying behaviour" YES NO

and

"to investigate the value
of various promotional
media" YES NO

and

other (please state): _____

C.4

Please indicate, by placing a circle around the figure that corresponds most closely with the answer of your choice, the degree of contribution your marketing department makes to the following management problem areas.

1 = not at all important 2 = unimportant 3 = important
4 = very important 5 = vital

Forecasting demand	1	2	3	4	5
Directing resources of the company	1	2	3	4	5
Making and maintaining contacts	1	2	3	4	5
Analysing client needs	1	2	3	4	5
Formulating plans to satisfy client's needs	1	2	3	4	5
Controlling pricing and tendering strategy	1	2	3	4	5
Developing strategic advertising campaigns	1	2	3	4	5
Maintaining strategic Public Relations campaigns	1	2	3	4	5

C.5

In your company do you have non-managerial (e.g. clerks, secretaries) and managerial (e.g. area managers) staff who are working for more than half their time in each of the following areas? (Your answer should relate to 1982).

	NON MANAGERIAL		MANAGERIAL	
	YES	NO	YES	NO
Market forecasting	YES	NO	YES	NO
Public relations	YES	NO	YES	NO
Advertising	YES	NO	YES	NO
Pricing	YES	NO	YES	NO
Sales representation	YES	NO	YES	NO
Sales management	YES	NO	YES	NO
Regional sales management	YES	NO	YES	NO
Negotiation	YES	NO	YES	NO
Other (please state)	_____			

C.5a

Can you illustrate, by means of a simple organisational chart, the structure of the marketing and selling functions in your company.

C.6

In the tendering process, does marketing have a role in any of the following:

Developing contacts	YES	NO
Ensuring opportunity to quote	YES	NO
Maintaining relationships	YES	NO
Using non-price features to meet clients needs	YES	NO
Making management aware of nature of particular organisation's buying behaviour	YES	NO
Collecting information on competition	YES	NO
Maintaining relationships during execution of the contract to provide feed back to management	YES	NO

Other (please state):

C.7 Do you feel any of the following comments summarise the objectives of your Advertising?

"to inform the market place of successful completed contracts"	YES	NO
"to make persuasive communication with selected target audiences"	YES	NO
"to support personal selling and Public Relations work"	YES	NO

C.7a What is the main objective of your advertising?:

C.7b Please indicate which of these other promotional tools you consider to be important.

1 = not at all important 2 = unimportant 3 = important
 4 = very important 5 = vital

Exhibitions	1	2	3	4	5
Seminars	1	2	3	4	5
Films	1	2	3	4	5
Company livery	1	2	3	4	5
Company logo, letterhead, etc.	1	2	3	4	5
Site boards, hoardings	1	2	3	4	5
Site housekeeping	1	2	3	4	5
Sales brochures	1	2	3	4	5
Promotional gifts	1	2	3	4	5
Other (please state)					
-----	1	2	3	4	5

C.8 Do you feel that Marketing has become more relevant to your company during the last five years?

YES NO

If YES please go to C.8a
If NO please go to C.9

C.8a Can you briefly state your reasons for answering yes to the previous question (please use a separate sheet if necessary).

C.9 Do you consider that Marketing will become more relevant during the next five years?

YES NO

If YES please go to C.9a
If NO please go to C.9b

C.9a Can you summarise your reasons for answering yes to the previous question (please use a separate sheet if necessary).

C.9b

Can you briefly state your reasons for answering no to the previous question (please use a separate sheet if necessary).

THANK YOU FOR COMPLETING SECTION C

THE POLYTECHNIC OF WALES
POLITECHNIG CYMRU

Director J. D. Davies
MSc, PhD, DSc, CEng, FICE, FIStructE

Department of Business
and Administrative Studies

Head of Department
J. D. Hill BA, MA, FBIM

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Telephone (0443) 405133

J.F. Reeve
Costain Group (UK) Ltd.
Costain House
Nicholsons Walk
Maidenhead
Berks. SL6 1LN.

Date 1st February, 1984

O/Ref PG/BD/ED Y/Ref

Dear *M. Reeve,*

Research into Marketing in the UK Construction Industry

Much has been written lately regarding the influence of Marketing techniques on company performance. This research is an attempt to quantify the benefits of Marketing effort in the UK Construction Industry. Please would you complete the attached questionnaire and return it in the 'FREEPOST' addressed, envelope, provided.

Your time is valuable and considerable effort has been spent to reduce the time involved in completing the questionnaire. This topic has a particular relevance to senior management decision making in your Industry, and we hope that the research will provide an insight into the relationship between Marketing effort and company performance. A summary of the research results will be given to all respondents who request it. To stimulate wider discussion and develop closer links between academics and practitioners, a conference may be held on the completion of the research project.

All the information you provide will be treated in the strictest confidence and reproduced only in statistical tables. The prime data will not be made available to any third parties. It will not be possible to identify any individual company.

We hope that you feel able to participate in the research and take this opportunity to thank you for your co-operation.

Yours sincerely,



E. Davies

POLYTECHNIC OF WALESSUBJECT: PILOT TEST OF ANALYSIS USING S.P.S.S.X.INTRODUCTION

Data has been collected on 38 major main contractor companies, operating in the U.K. Construction Industry.

The data are as follows:

Sales p.a. 1980 (£000's)	-	SALPA 80
Net profit to sales 1980 (%)	-	NPS 80
Return on capital employed 1980 (%)	-	ROCE 80
Earnings per share 1980 (Pence)	-	EPS 80
Sales p.a. 1981 (£000's)	-	SALPA 81
Net profit to sales 1981 (%)	-	NPS 81
Return on capital employed 1981 (%)	-	ROCE 81
Earnings per share 1981 (Pence)	-	EPS 81
Sales p.a. 1982 (£000's)	-	SALPA 82
Net profit to sales 1982 (%)	-	NPS 82
Return on capital employed 1982 (%)	-	ROCE 82
Earnings per share 1982 (Pence)	-	EPS 82

RANK A rank score given to each main contractor by
 RANK B four judges on the basis of their "development"
 RANK C of the marketing function in their company during
 RANK D 1980-1982. Score 5 = very good development;
 Score 1 = almost no development.

The data was run on a DEC 2060 using S.P.S.S.X.

The following new variables were created:

Sales growth (1982 Sales difference on 1980, expressed as a percentage) = S. GROWTH

Net profit to sales average (the average of the three years)
 = NPS AVER

Return on capital employed average (the average for the three years)
 = ROCEAVER

Earnings per share average (the average for the three years)
 = EPSAVER

Sum of the judges ranks (a simple addition of the four judges scores, per case) = RANKSUM

The complete programme is presented below.

```
file handle conmkt/name='bciv.dat'
```

```
data list file=conmkt records=4  
/1 salpa80 7-15 nps80 16-22(1) roce80 23-29(1) eps80 30-37(1)  
/2 salpa81 7-15 nps81 16-22(1) roce81 23-29(1) eps81 30-37(1)  
/3 salpa82 7-15 nps82 16-22(1) roce82 23-29(1) eps82 30-37(1)  
/4 ranka 1-2 rankb 3-4 rankc 5-6 rankd 7-8
```

```
list cases to 10
```

```
frequencies variables=salpa80 to eps82
```

```
compute S.GROWTH=((salpa82-salpa80)/salpa*100)  
compute NPSEVER=((nps82+nps81+nps80)/3)  
compute ROCEAVER=((roce82+roce81+roce80)/3)  
compute EPSAVER=((eps82+eps81+eps80)/3)  
compute RANKSUM=(ranka+rankb+rankc+rankd)
```

```
frequencies variables=S.GROWTH to EPSAVER
```

```
npair tests kendall=ranka to rankd
```

```
crosstabs tables=ranksum by s.growth/ranksum by npsaver/  
ranksum by roceaver/ranksum by epsaver
```

```
options, 1 4 5  
statistics 1 11
```

```
do if (ranksum lt 12)  
compute grp=1  
else  
compute grp=2  
end if
```

```
npair tests k-s =s.growth by grp(1,2)/  
" " " =npsaver by grp(1,2)/  
" " " =roceaver by grp(1,2)/  
" " " =epsaver by grp(1,2)/
```

```
FINISH
```

ANALYSIS

- i) Kendall's Coefficient of Concordance was applied to the Judges rank scores per case to evaluate the degree of association amongst their scores.

<u>Variable</u>	<u>Mean Rank</u>			
Rank A	2.67			
Rank B	2.58			
Rank C	2.45			
Rank D	2.30	W	=	.0183
		Chi Square	=	2.0906
		D.F.	=	3
		Significance	=	.5538

Clearly the value for W suggests little concordance between the judges.

- ii) Cross tabulations

The four performance variables of S.GROWTH, NPSAVER, ROCEAVER and EPSAVER were cross tabulated with RANKSUM.

- a) Sales Growth by Rank Sum: Number of Cases

Sales Growth %				
Rank Sum	*1 -20 - 0.45	1.36 - 10.53	11.32 - 31.86	45.15-167.78
0 - 8.00	1	—	—	—
8.01 - 12.00	7	3	3	—
12.1 +	6	3	10	3

Missing cases = 2

*1 Negative financial growth over the three year period.

- b) Net Profit to Sales Average: Rank Sum: Cases

Net Profit:Sales %				
Rank Sum	1 - 2.9%	3 - 5.9%	6 - 11.9%	12% +
0 - 8.00	—	—	1	—
8.01 - 12.00	5	1	1	—
12.1 +	7	10	7	—

Missing cases = 5

c) Return on Capital Employed, Average:Rank Sum:Cases

R.O.C.E. %			
Rank Sum	0 - 20%	21 - 50%	51 - 72%
0 - 8.00	—	—	—
8.01 - 12.00	6	3	4
12.00 +	9	9	—

Missing cases = 7

d) Earnings per Share Average:Rank Sum:Cases

Earnings per Share (Pence)			
Rank Sum	0 - 11.9	12 - 23.9	24 +
0 - 8.00	—	1	—
8.01 - 12.00	3	3	—
12.1 +	5	14	6

In general terms, the cross tabulations show the expected distribution, i.e. those cases with lower judgemental rankings displayed poorer performance than those with higher judgemental rankings.

iii) Kilmogorov-Smirnov Two Sample Test

This test was used on each performance variable after the sample had been sorted into "non marketers", (with a Rank Sum of less than or equal to 11.99) = Group One; and "marketers", (with a Rank Sum of greater than or equal to 12) = Group Two.

This K-S test is a test of whether two independent samples have been drawn from the same population (or from populations with the same distribution).

For our purposes, the one tailed test can be used to decide whether or not the value of the population from which one of the samples was drawn are stochastically larger than the values of the population from which the other sample was drawn.

Kilmogorov Smirnov Two Sample Test

Summary

	Z	Significance *1
Sales Growth	1.111	8% level
Net Profit:Sales, Av.	0.923	18% level
R.O.C.E. Average	0.702	35% level
E.P.S. Average	0.748	21% level

*Significance level on a one tailed test i.e. percentage probability that occurrence happened by chance.

CONCLUSIONS

The primary conclusion must be that there is inconclusive data to either support or undermine the hypothesis that "marketing" companies perform "better" than "non-marketing" companies.

Certainly the Kendall results are disappointing and from this point, cases could have been wrongly filed, therefore, producing the K-S results *1.

However, the shape of the cross tabulations is encouraging. The next step is to use a refined questionnaire and a larger sample.

E. DAVIES

- *1 Consideration of the judges scores suggests that one judge may have inadvertently reversed the scale. Accordingly we could expect the degree of concordance to be much greater.

			1-3
--	--	--	-----

POLYTECHNIC OF WALES

QUESTIONNAIRE

INSTRUCTIONS TO RESPONDENTS

The questions below are of two forms:

Firstly, "closed" questions, where answers are provided for you to select the one which most closely corresponds with your answer. For "closed" questions, please write the number which corresponds to the answer of your choice in the box provided, to the right of the question.

Secondly, "open" questions, where you give your specific answer in the space provided, or on a separate sheet if necessary. For "open" questions, please leave the boxes in the margin, blank.

Please answer each question as appropriate.

Thank you for your help in the research.

A. Which of the following best describes your company ?

- Manufacturer of primary building products 1
- Manufacturer of finished building products 2
- Builders' Merchant 3
- Main Contractor 4
- Specialist sub-contractor 5
- Other, please specify _____ 6

	4
--	---

B. What is the approximate number of employees in your firm ?

- Less than 100 1
- 100 - 249 2
- 250 - 499 3
- 500 - 999 4
- More than 1,000 5

	5
--	---

C. What is your job title ?

- Chairman/Managing Director 1
- Marketing Director 2
- Sales Director 3
- Marketing Manager 4
- Sales Manager 5
- Other, please specify _____ 6

	6
--	---

D. Please give your actual title

	7
--	---

			8,9
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E. The Institute of Marketing had defined Marketing as:-

"The Management function which organises and directs all those business activities involved in assessing and converting purchasing power into effective demand for a specific product or service to the final customer so as to achieve the profit target or other objectives set by the company".

Do you agree with this definition in the context of the Construction Industry ?

- Yes 1
- No 2
- Undecided 3

If Yes/Undecided go to G.

If No go to F.

F. If No, please give your definition of Marketing appropriate to the Construction Industry.

G. Using the I.O.M. definition, please give your opinion of U.K. main contractors' adoption of the marketing concept compared to Capital Goods industries during the first half of the 1980's.

- Outstanding 1
- Above average 2
- Average 3
- Below average 4
- Poor 5

14, 15,

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11. We have selected, randomly, 38 well known main contractors. Please use your expert opinion and rank each contractor using the above scale, on their adoption of the marketing orientation. Enter your answers in the boxes on the right.

	Out Standing	Above Average	Average	Below Average	Poor	
Aberdeen Construction	1	2	3	4	5	<input type="text"/> 17
Bett Bros.	1	2	3	4	5	<input type="text"/> 18
Henry Boot	1	2	3	4	5	<input type="text"/> 19
Brown & Jackson	1	2	3	4	5	<input type="text"/> 20
Bryant Holdings	1	2	3	4	5	<input type="text"/> 21
Burnett & Hallamshire	1	2	3	4	5	<input type="text"/> 22
R. Costain	1	2	3	4	5	<input type="text"/> 23
Derek Crouch	1	2	3	4	5	<input type="text"/> 24
R.M. Douglas	1	2	3	4	5	<input type="text"/> 25
Fairclough Construction Group	1	2	3	4	5	<input type="text"/> 26
John Finlan	1	2	3	4	5	<input type="text"/> 27
French Kier Construction	1	2	3	4	5	<input type="text"/> 28
Galliford Brindley	1	2	3	4	5	<input type="text"/> 29
M.J. Gleeson	1	2	3	4	5	<input type="text"/> 30
W. & J. Glossop	1	2	3	4	5	<input type="text"/> 31
Higgs & Hill	1	2	3	4	5	<input type="text"/> 32
I.D.C. Group	1	2	3	4	5	<input type="text"/> 33
John Laing	1	2	3	4	5	<input type="text"/> 34
Walter Lawrence	1	2	3	4	5	<input type="text"/> 35
F.J.C. Lilley	1	2	3	4	5	<input type="text"/> 36
Y.J. Lovell	1	2	3	4	5	<input type="text"/> 37
Marchwiel Holdings	1	2	3	4	5	<input type="text"/> 38
Stanley Miller	1	2	3	4	5	<input type="text"/> 39
A. Monk & Co.	1	2	3	4	5	<input type="text"/> 40
John Mowlem	1	2	3	4	5	<input type="text"/> 41
Newarthill	1	2	3	4	5	<input type="text"/> 42
C.H. Pearce	1	2	3	4	5	<input type="text"/> 43
Pochin's	1	2	3	4	5	<input type="text"/> 44.
Rush & Tompkins	1	2	3	4	5	<input type="text"/> 45
William Sindall	1	2	3	4	5	<input type="text"/> 46
Streeters of Godalming	1	2	3	4	5	<input type="text"/> 47
Tarmac	1	2	3	4	5	<input type="text"/> 48
Taylor Woodrow	1	2	3	4	5	<input type="text"/> 49
Tilbury Group	1	2	3	4	5	<input type="text"/> 50
Trafalgar House (Cementation)	1	2	3	4	5	<input type="text"/> 51
Turriff	1	2	3	4	5	<input type="text"/> 52
Tyson's	1	2	3	4		<input type="text"/> 53
Thomas Warrington	1	2	3	4		<input type="text"/> 54
Whallings	1	2	3	4		<input type="text"/> 55
George Wimpey	1	2	3	4		<input type="text"/> 56
						<input type="text"/> 58, 59
						<input type="text"/>

I. Please rank your own company on the same scale.

Outstanding	Above Average	Average	Below Average	Poor
1	2	3	4	5

--

61, 62,

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THANK YOU FOR COMPLETING THE QUESTIONNAIRE.

PLEASE RETURN IT IN THE FREEPOST ENVELOPE PROVIDED.

Appendix 7

Dear C.I.G. Member,

Marketing Effectiveness

The relationship between company performance and effective marketing is well understood by industry practitioners. A recent study, by the Institute of Marketing in conjunction with the University of Bradford and Industrial Market Research Ltd., has highlighted this relationship in U.K. industry in general.

The Construction Industry, however, has a number of characteristics that set it apart from much manufacturing industry. We are interested in exploring the effect of these differences on marketing effectiveness and company performance.

As a member of the Construction Industry Group, your expert opinion is vital to this study. Attached is a short questionnaire. We would be grateful if you would find the time to complete the questionnaire and return it to us in the FREEPOST envelope provided. The questionnaire should take you about ten minutes to complete and we would be pleased if we could receive your completed questionnaires, fourteen days from the above date.

As you know, the number of professionals engaged in this field is relatively small. Your co-operation is, therefore, particularly important to the success of the study.

As a respondent, you will receive a copy of the research analysis - this will not be made available to non-respondents.

We must assure you that individual confidentiality will be strictly maintained. It will not be possible to identify individual responses.

Yours sincerely,

ERIC DAVIES

P.S. This questionnaire is only being distributed to C.I.G. members because of your position in the industry - we do need your support. Thank you.

Appendix 9

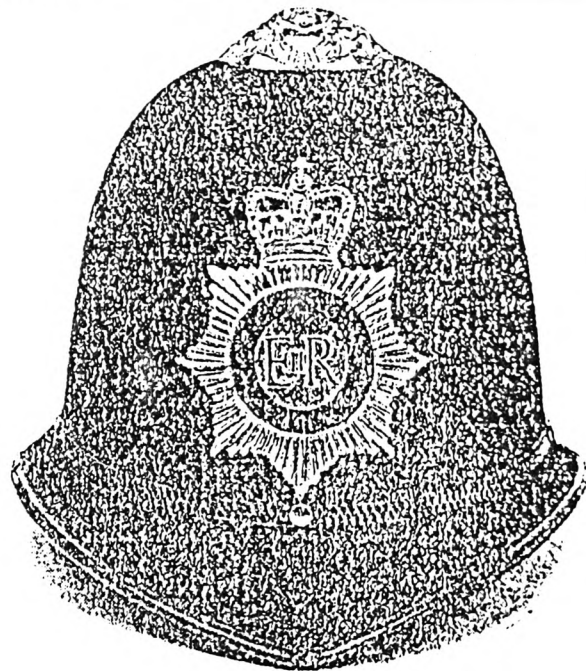
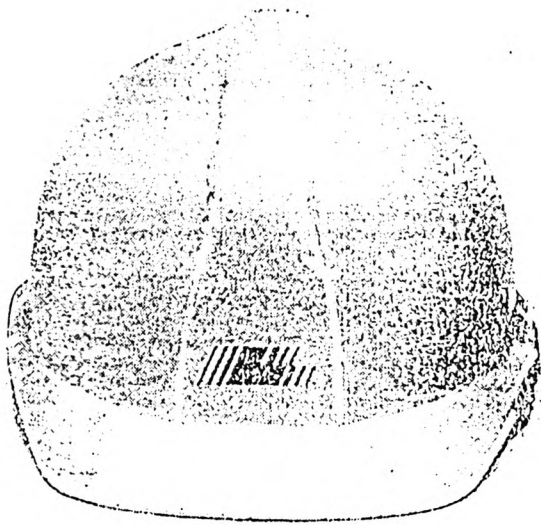
Average Sales Growth for each group

	Marketing (3.00)	Non-Marketing (4.00)
	- .78	-20.12
	- .21	-19.79
	.45	-19.32
	10.53	-17.11
	16.27	-16.64
	17.63	-12.68
	18.38	-11.92
	18.98	-10.51
	22.66	- 9.59
	22.75	- 9.28
	31.36	- 6.71
	51.78	1.36
		3.43
		5.44
		7.87
		9.22
		11.32
		14.15
		16.44
		22.12
		29.61
		30.30
		31.86
		45.15
		93.76
		167.78
Average	16.9	12.30
Minimum	-7.78	-20.12
Maximum	51.78	167.78

Appendix 9

Average Return on Capital Employed for each group

	"Marketing"	"Non-Marketing"
	13.07	5.20
	14.57	5.60
	15.27	6.87
	16.60	7.33
	21.87	10.57
	28.10	13.40
	28.73	13.40
	30.03	15.93
	31.53	16.70
	43.73	16.77
	53.43	17.87
		18.57
		36.33
		37.03
		45.20
		48.73
		48.87
		54.83
		56.40
		71.20
Average	27.00	27.34
Minimum	13.07	5.20
Maximum	53.43	71.20



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But how does Lovell's Law protect the client's interest?

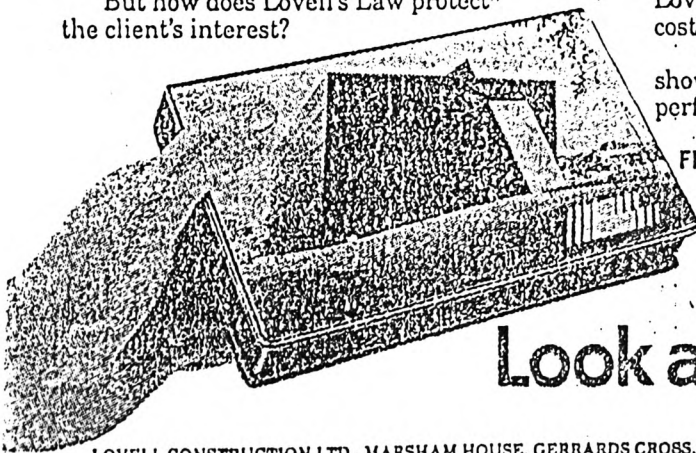
Certainly not through a formula that substitutes a set of rules for judgement and experience.

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