EXECUTIVE NOTIONS ON DRIVERS OF LONG TERM BUSINESS SUCCESS FOR CONSTRUCTION CONTRACTORS

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Summary
This paper reports on an evaluation of the factors that are considered by construction company executives as essential business drivers. The aim of the research was to identify those managerial variables that feature prominently in strategy formulation, and have been previously associated with superior corporate performance. The research posed the question 'which business drivers are viewed as most essential and are addressed in strategic planning within construction contracting organisations?' It drew on previous studies to establish a set of factors which are associated with long-term business success. Several factors, both external and internal to construction companies, have already been established by a case study. These factors directly influence corporate performance, and therefore should feature prominently in strategy formulation for contractors. The Likert scale was employed to analyse the executive notions. The business drivers were analysed into primary, secondary, and non-essential. The analysis provides an insight into the common factors that form the focus of strategy for construction contractors. The results of this work provides an insight on the actual factors considered pertinent in strategy formulation, and reflects the current focus of strategy within construction companies. It also provides a useful background for developing critical success factors for the construction contractor.

Keywords: Executive notions, business drivers, strategy, construction contractors.

Introduction
The business environment of construction contractors has experienced three major structural shifts from 1960 into the 1980's [Lansley 1987, Flanagan 1995], each having very different implications for the construction contractor. The structure of contractors' business environment has undergone further transformation since 1990. The ability of construction contractors to cope with these major changes of their business environment in the past, has depended on the adoption of appropriate business strategies. It is widely accepted that an effective strategy for the construction contractor is an essential ingredient to the long-term survival of its organisation [Friedman 1984, Newcombe et. al. 1990]. A contractor's strategy holds such considerable impact for its organisation, that the outcome of its implementation frequently spells success, collapse or financial distress for the company. What will constitute an effective strategy can be established only after it has been implemented. However, the role played by the various factors that come together to shape the outcome of the strategy process can be ascertained by examining executive perceptions on what constitutes their long-term business drivers, since strategy within construction organisations is an executive activity. Eliciting executive notions on the drivers of their business should provide a useful insight on the factors considered by construction contractors as essential for their long-term survival, and which therefore occupy their concerns in strategy formulation.

Changing nature of contractors' strategies
The construction industry has, within the period from 1960 to the latter part of 1980s, undergone several major changes in the nature of its business, a phenomenon which

has required construction contractors to make a shift in the nature and considerations for formulating their strategies, in order to achieve success [Cannon and Hillebrandt 1991]. Lansley [1987] described these major changes as follows:

- the period from 1960 to 1970 was characterised by long-term stable environment, and strategy was based on competitiveness through size, which manifested itself as 'internal' growth;
- the period from 1970 to 1980 was characterised by harsh environmental changes, which affected total demand for construction and the structure of its markets, strategy was based achieving growth through effective marketing of services; and,
- the period from 1980 to 1990 was characterised by changes in the structure of the industry as a result of client perception of the role of the construction industry, and intense competition as a result of the rise in the number of companies operating in the industry, strategy was based on achieving competitiveness through specialisation and exploitation of niches in markets.

These major changes were in response to a shift in the general economy and its relationship with the construction industry, and led to different emphasis on the factors that determine the long-term strategies of construction contractors.

Duffell [1995] and McLellan [1995] argued that from 1993, a new and different relationship between the general economy and the construction industry has been emerging, in which the traditional demand for the industry's workload has altered considerably, further worsening the very fierce competition which exists in the industry. Strategies to ensure business success for construction contractors in the 1990's have been suggested as greater co-operation with other parties in the industry [Yates and Mukherjee 1993]. This view was reflected by Latham [1994] in a report on procurement and contractual arrangements, aimed at addressing the effective strategy for construction in the United Kingdom. Strategies that address the long-term success of construction contractors, and which are likely to evolve into the year 2000, will depend very much on the notions and perceptions of the executives of construction contractors. The factors they consider to be the major driving force of their business for the future provide an insight on what is likely to influence the long-term strategies that will be adopted for their business enterprises.

Objective of the study

This paper reports on an evaluation of the factors that executives of construction contractors consider as essential business drivers for their companies. The main aim of the research was to identify those variables that feature prominently in their strategy formulation, with the view of identifying the common practices, in terms of the focus of strategy, involved in the often informal strategy making process within construction companies.

Methodology

The research approach drew together the results of a case study [Edum-Fotwe et. al. 1994],and information obtained from a review of previous studies aimed at establishing a set of factors which are associated with long-term business success. The various factors were grouped as: external, for factors that the construction contractor can exercise no direct control; and internal, for factors that are directly influenced by the construction companies. Since these factors directly or indirectly influence corporate performance of construction contractor, they should feature prominently in strategy formulation for contractors. The research posed the question 'which business drivers are viewed as most essential and are addressed in strategic planning within construction contracting organisations?' Empirical testing of these business driver factors was undertaken for twenty large construction companies. The

elicitation of executive notions is generally qualitative, and the technique of scales, was therefore adopted to enable quantitative analysis for the various notions expressed.

The method of 'scales' was derived from social and management research [Easterby-Smith et. al. 1991]. It relies on the elicitation of information or knowledge on the part of a subject, (in this case executives of construction organisations), about an object (i.e. the strategy formulation process). The fundamental observation for the construction of scales for the measurement of managerial variables derives from the expression of a belief by a person concerning the characteristics of a defined object. Three types of scales can be constructed from a set of observations, each referring to a person's expression of a belief about an object. The basis of the distinction is the designation of the class of observations to which numerical assignments are made. Three components of such belief characteristics were identified by Upshaw [1968] as, the subject who holds it, the content of the belief, and the object to which it is directed. Upshaw [1968] further explained that in the measurement of managerial decision variables, the scale values can be assigned to observations that correspond to any of one of the three belief components, namely the *subject, content, or object.* The concept of content-scales best reflects the elicitation of the notions on the business drivers, and was adopted in mapping out the degree to which executives of construction contracting organisations agree on the importance of the various business drivers derived by a case study.

Several scales for mapping qualitative responses have been developed for application to social and management research. These include the Likert scale [Upshaw 1968], which was adopted for this work because of its simplicity and suitability for eliciting the executive notions. This method employs the semantic differentiation of executives regarding a business drive factor, to arrive at a consensus on the importance of that particular factor to strategic survival. The Likert method for constructing scales involved the initial compilation of a set of statements or managerial variables related to the content of the strategy formulation process. This was achieved in an initial case study [Edum-Fotwe et. al. 1994] and general review of literature. Subsequently, the statements were presented to a group of respondents; (executives of construction companies that have a formalised approach to strategic management); to be rated according to the degree to which the variables were acceptable or unacceptable based on their own judgement. The scale employed two opposite poles to classify the perception of the executives. On the basis of the data obtained from the respondents, the variables were evaluated for their degree of importance in the long-term strategy of the contractors. Each of the business drivers was represented as a phrase, and one of five response categories of *Very Important* (VI), *Important* (I), *Neutral* (N), *Not Important* (NI), *Very Not Important* (VNI), was defined for the executives. The factors that were evaluated as essential and forming the focus of contractors' strategy formulation were those which met a defined statistical criterion. The modal value for each factor from such a discrete distribution of the responses, presented a better representation for analysing central tendency of consensus. A modal value for the variable in the VI and I range was employed as the acceptance criterion for defining the factors essential to contractor strategy formulation.

Business-drive factors

Detailed analysis of what would constitute business drivers for construction contractors is likely to reveal emphasis on different managerial perspectives from one company to another. The managerial perspectives can however be classed under the generic groups of internal and external factors. Table 1 presents the internal factors. These are managerial functions which are usually controllable by the construction contractor. Table 2 presents a list of the external factors. These comprise two categories, factors that affect all construction contractors to the same degree, such as

the general economic climate and social trends. The second category is composed of factors that affect the various construction contracting companies in different ways. These include manpower supply and political developments at international level. The business drivers presented in Tables 1 and 2 were compiled from general literature [Friedman 1994], and annual corporate reports from 1989 to 1992, for Tarmac, Taylor Woodrow, Mowlem, and John Laing. These were then validated with a case company [Edum-Fotwe et. al. 1994].

Table 1: Internal business drivers

Quality of management
Quality of workforce
Quality of product or service
Financial capacity
Achieving low cost of production
Pricing policy
Flexibility to changes in construction and other industries
Personal contacts with client organisations
Company image
Network of branch offices
Direct advertising and promotion
Information (general and industry-specific)
Own subsidiaries in business outside construction industry
Own subsidiaries in construction related businesses
Market share of company

Compiled from Edum-Fotwe et. al.[1994], Friedman [1994], Annual reports 1989-1992 for Tarmac, Taylor Woodrow, Mowlem, and John Laing

Table 2: External business drivers

General economic climate
Trend of technological development
Political development at national level
Political development at international level
Social trends
Manpower supply and availability
Payment conditions within industry
Competition within company's markets
Health of industry's markets
Size of the industry's markets
Activities of major competitors
Activities of client organisations
Financial information on major competitors and clients

Compiled from Edum-Fotwe et. al.[1994], Friedman [1994], Annual reports 1989-1992 for Tarmac, Taylor Woodrow, Mowlem, and John Laing

Profile of respondents

Questionnaires were administered to the top one hundred UK construction contractors [Construction News 1993]. The expected response rate of thirty percent which is normally associated with questionnaire surveys was achieved. Twenty-four

respondents provided detailed responses to the questions, and six companies provided no answers to the questions. Figure 1 presents the percentage distribution of the respondent companies regarding strategic planning as a formalised corporate activity, and demonstrates that 87.5 per cent of the respondents performed strategic planning as a formalised activity, making them very suitable for data elicitation on executive notions.

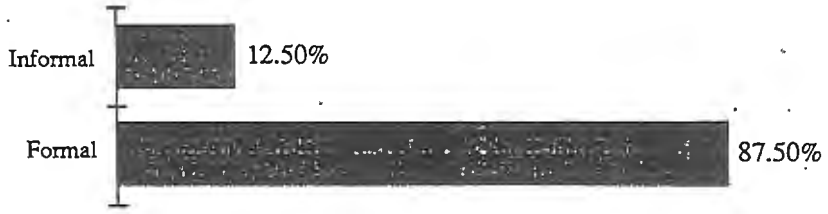

Figure 1: Distribution of respondents approach to strategic planning

Table 3 presents the characteristics of the respondent companies, and indicates the level of executive participation in the strategy process. This reflects executive nature strategy activity, and justifies the elicitation of executive notions in explaining the focus of construction contractors strategy formulation.

Results and analysis

To facilitate the analysis of the responses, the following numerical values were assigned to the various measures of the scaled notions.

- Very important (VI) 1
- Important (I) 2
- Neutral (N) 3
- Not important (NI) 4
- Very not important (VNI) 5

Table 4 and Table 5 summarise the results of analysis for the data to determine the degree of importance for the various factors to construction contractors' strategy. The main hypothesis tested was that each of the business drivers will be a prime factor that shapes contractors strategy, thereby forming their strategic focus. The analysis assumed for each of the factors the mean notion will be very important (VI). The distribution of the responses for each factor was therefore compared to the scale measure of very important (VI), to determine if significant differences exist between the two values. The t-statistic was adopted to evaluate the equality of means between the modal value of the distribution of responses and the value for the VI measure on the scale. A t-value below 8.00 was interpreted as sufficient grounds for accepting the null hypothesis, as this conformed to a modal notion of VI or I. A value of the t-value greater than 8.00 but below 10.00 was interpreted as indicating insufficient proof for accepting the null hypothesis, and a value of 10.00 interpreted as evidence of complete non-importance of the corresponding factor as a business driver for construction contractors and the alternative hypothesis was accepted for these cases. The various distributions of the responses were all characterised by very low levels of skewness, giving a good indication of the 'representativeness' for their central tendency. Where the responses for a factor produced a bi-modal distribution, it was classified with the less important scale measure. Figures 2 and 3 present a plot of the distributions of responses on the notions of the construction executives.

Table 3: Characteristics of respondent companies

Company Number	*Turnover £million (1993)*	*No. Employed (1993)*	*Designation of Respondent*	*Participants in Strategy Formulation*
1	280	150	Personnel Director	Directors, Functional Mangers and Regional Managers
2	48	950	Chief Executive Officer	Directors, Area Managers and Chief QS & Estimators
3	95	450	Group Managing Director	Directors, Functional Managers and Divisional Managers
4	60	680	Development Director	Chairman MD Development Director
5	1250	8600	Director of Strategic Planning	Directors and Divisional Managers
6	37	120	Managing Director	Directors and Regional Managers
7	250	2000	Managing Director	Directors and Regional Managers
8	130	550	Marketing Director	Directors
9	2600	2200	Head of Group Plng & Development	Directors and Business Unit Managers
10	56	500	Managing Director	Directors
11	8000	5000	Director	Corporate and Regional Directors
12	456	3500	Group Comm. Manager	Directors and Business Unit Managers
13	100	3000	Deputy Chairman	Chairmen and Unit Directors
14	100	500	Chief Executive Officer	CEO and Functional Directors
15	180	450	Managing Director	Corporate and Regional Directors
16	1100	3000	Managing Director	CEO and Functional & Divisional Directors
17	250	1600	Chief Executive Officer	Corporate and Regional Directors
18	55	250	Managing Director	Divisional & Group Board of Directors
19	30	250	Managing Director	Directors and Departmental Managers
20	130	864	Chief Executive Officer	Directors
21	24	320	Deputy Chairman	Directors and SBU Managers
22	1600	11590	Corporate Devpt Manager	Directors, and Functional & Regional Managers
23	24	512	Managing Director	Directors
24	361	3650	Chief Executive Officer	Directors and SBU Managers

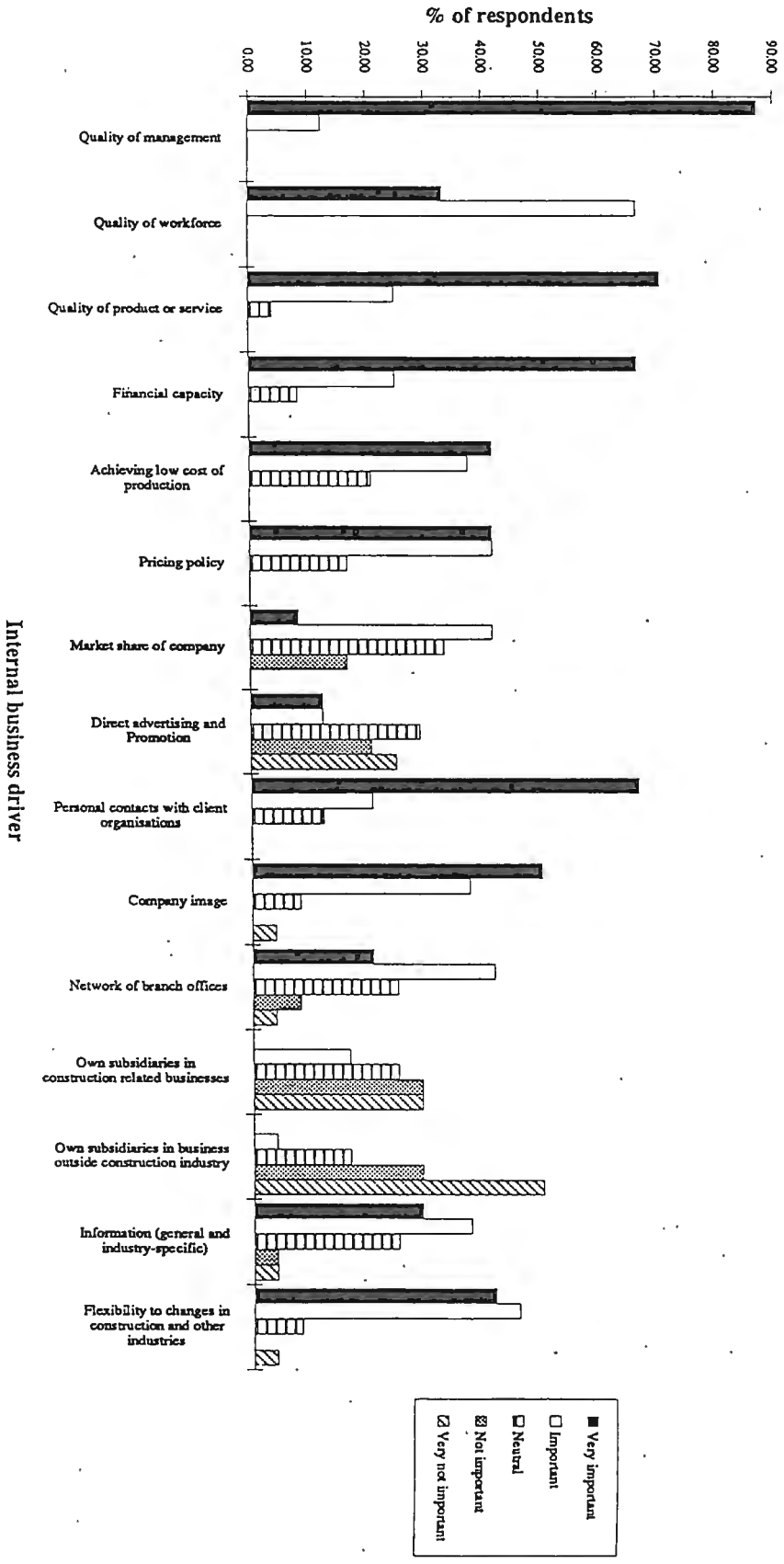

Figure 2: Distributions of executive notions- internal drivers

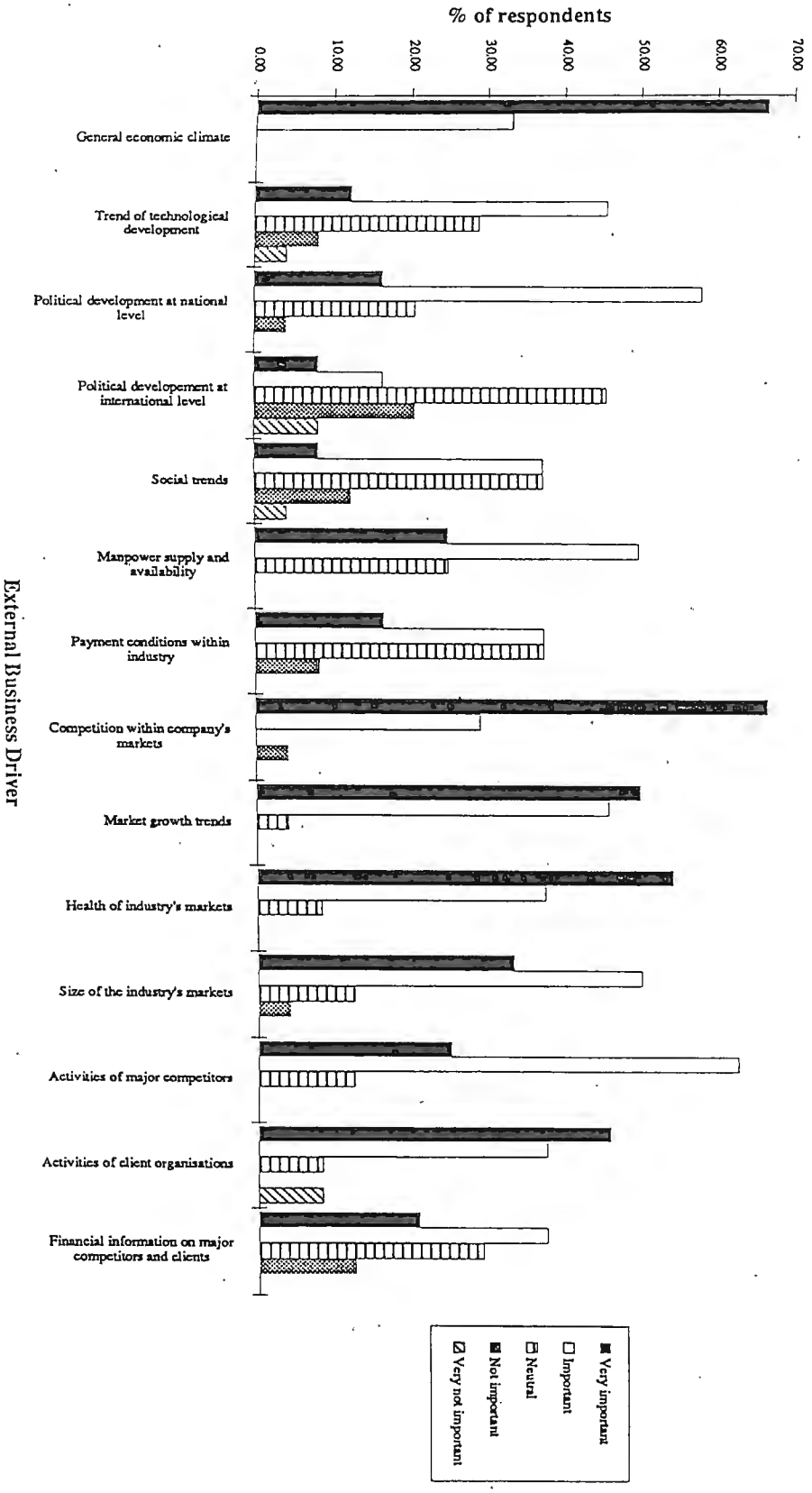

Figure 3: Distributions of executive notions- external drivers

Table 4: Statistical tests for importance of internal business driver

Business drive factor	*Modal notion*	*Skewness*	*t-statistic* (μ=VI)*	
Quality of management	1	2.83	1.446§	H_0
Quality of workforce	2	-0.66	6.78	H_0
Quality of product or service	1	1.34	2.89	H_0
Financial capacity	1	1.19	3.12	H_0
Achieving low cost of production	1	0.35	4.98	H_0
Pricing policy	1.5	0.39	4.98	H_0
Payment conditions within industry	2.5	-0.01	7.70	H_0
Competition within company's markets	1	1.97	2.85	H_0
Market share of company	2	0.12	7.81	H_0
Direct advertising and Promotion	3	-0.28	8.53	H_1
Personal contacts with client organisations	1	1.14	3.11	H_0
Company image	1	0.67	4.09	H_0
Network of branch offices	2	0.06	6.22	H_0
Own subsidiaries in construction related businesses	4.5	-0.02	10.97	H_1
Own subsidiaries outside construction industry	5	-0.58	15.20	H_1
Information (general and industry-specific)	2	0.31	5.70	H_0
Flexibility to changes in construction and other industries	2	0.42	4.83	H_0

* $p<0.01$

Table 5: Statistical test for importance of external business drivers

Business drive factor	*Modal notion*	*Skewness*	*t-statistic* (μ=VI)*	
General economic climate	1	0.66	3.39	H_0
Trend of technological development	2	0.24	7.77	H_0
Political development at national level	2	0.43	7.44	H_0
Political development at international level	3	-0.08	9.60	H_1
Social trends	2.5	0.38	8.48	H_1
Manpower supply and availability	2	0.00	6.78	H_0
Market growth trends	1	0.46	4.51	H_0
Health of industry's markets	1	0.73	4.03	H_0
Size of the industry's markets	2	0.70	5.38	H_0
Activities of major competitors	2	0.05	7.00	H_0
Activities of client organisations	1	1.67	3.68	H_0
Financial information on major competitors and clients	2	0.18	6.78	H_0

* $p<0.01$

Tables 6, 7 and 8 present the various factors grouped into the degree of importance for strategy formulation by construction contractors. These have been categorised into primary and secondary for the ones that averaged *very important* (VI) and *important* (I) respectively. The third category of non-essential factors, group together the business drivers for which executive notions did not provide sufficient grounds for considering them as part of the common focus corporate strategy for construction contractors.

Table 6: Primary business drivers (VI) for contractors

Internal factors
Quality of management
Quality of product or service
Financial capacity
Achieving low cost of production
Personal contacts with client organisations
Company image
External factors
General economic climate
Competition within company's markets
Market growth trends
Health of industry's markets
Activities of client organisations

Table 7: Secondary business drivers (I) for contractors

Internal factors
Quality of workforce
Pricing policy
Market share of company
Network of branch offices
Information (general and industry-specific)
Flexibility to changes in construction and other industries
External factors
Trend of technological development
Political development at national level
Manpower supply and availability
Size of the industry's markets
Activities of major competitors
Financial information on major competitors and clients

Table 8: Business drivers perceived as non-essential by contractors

Internal factors
Direct advertising and Promotion
Own subsidiaries in construction related businesses
Own subsidiaries outside construction industry
External factors
Political development at international level
Social trends
Payment conditions within industry

Discussion

The importance of managerial input and the quality of the service construction contractors provide is seen as a key part in their long-term business success. Construction contractors' management is dominated by the management of projects, each of which is a one-off. Ensuring that the right type of managers are in place for the different projects should be a more crucial aspect of their strategy than other processes. Equally the creation of the right corporate image, and personal contacts with client organisations ranking very high in their strategic focus, is indicative of the complex relationships that exists in an industry where direct advertising plays very little part in maintaining turnover. Such relationships hold the potential for developing appropriate strategic alliances for the industry. The importance of financial capacity and low production costs to construction contractors stems from the changing pattern from cash positive to cash negative for a sector which has in the past relied on low capital requirement for operation.

Of secondary importance to their strategy are factors such as quality of workforce, market share and presence, information and flexibility to changes in their business environment. Construction contractors, by the nature of their business have to adapt from one project to another, a condition requiring a considerable amount of flexibility. The secondary role of business flexibility is therefore to be expected that, as most construction contractors already adept at coping in a turbulent business environment. This is characterised by a short-term approach to their corporate planning [Cannon and Hillebrandt 1992]. The lesser emphasis on attaining quality workforce is reflects the several contractual arrangements that operate in the industry, which allows contractors to discharge their business by outsourcing some parts of projects.

The result that was most unexpected is the lesser role for exploiting general and industry-specific information in gaining competitive advantage by construction contractors. In an era of increasing competition and developments in information technology, it would have been expected that this will play a greater role in their strategy. There is a scope therefore for encouraging the development of a greater emphasis on incorporating information and its technology counterpart for improving their competitive advantage.

The increasing pace of development towards a global market for construction business. For example, the progression of the European Union would suggest that construction contractors will be paying greater attention to global markets and politics [Messerlin 1993]. The results of the survey on the contrary, suggests that construction contracting is likely to remain a predominantly domestic business activity with very traditional practices.

Conclusion

The research has identified the common business drivers that form the focus of what is often an informal approach to strategy formulation within construction contracting organisations. This was achieved by a survey of executive notions.

To attain long-term business success construction contractors perceive four internal factors their key business drivers. These are quality of management and service, achieving lower cost of production and adequate financial capacity, development of appropriate strategic alliances to maintain turnover, and creating the right corporate image for their enterprise. The results provides an insight on the managerial variables that influence construction contractors' strategies. It also reflects the current focus of strategy within construction companies, and provides a useful background for developing critical success factors for the construction contractor.

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