

CONSTRUCTION ACTIVITY IN THE UK RECENT TRENDS AND PROJECTIONS

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The general perception of the impact of the recession on the construction activity has been somewhat gloomy. However, a closer examination of the construction activity reveals that they vary significantly from sector to sector and in geographical term. Initially, this paper investigates and analyses the extent and nature of construction activity across many sections of various industries over the past years. Then, the paper exploits the outcome of the survey of the construction activity that is to be carried out in the near future. The paper highlights the areas of increasing activities and categorises them in terms of their type, operation and nature. The work reveals that, as far as geographical variations are concerned, there is a high concentration of activity in the North of England. As regard sub-sectors of the economy, much of the activity is expected to be in retail, offices, factories and warehouses.

Keywords: Construction growth, construction output, construction orders.

INTRODUCTION

The 'feel-good factor' has been ringing in our ears for the past four years and there have been many economic calculations in support or against its existence. But, with the economy performing satisfactorily, the GDP growth swinging between 2% and 4%, low interest rates of around 6%, unemployment and inflation rates controlled, the feel-good factor has been around for some time but not really felt. This could be attributable to the low level of confidence in the performance of the construction industry. Therefore, it is imperative to identify the extent of activity within the industry and determine its nature. Many procurers are unaware of the needs of the clients in terms of project type, project operation, the geographical spread of the projects and the way the clients intend to procure their project.

The paper develops an understanding about the volume and nature of construction activity and examines the performance of the industry in terms of the level of output and the orders applicable to a variety of sectors of the UK economy. Then the work is complemented by the analysis of the data relating to future activity within the industry.

CONSTRUCTION ACTIVITY IN RECENT YEARS

A number of sources of statistical data have been used in order to develop the profile of activity in various sectors of UK economy. An examination of the published statistical analysis of the construction activity over recent years is divided into Public non-housing, Industrial and Commercial.

The overall activity is reviewed in terms of the level of output and the orders. For each sector, an overall analysis is conducted which is then followed by sub-sector

analysis. Also, the forecast for total new work output is examined for all sectors.

Public Non-Housing

Figure 1, reveals that, based on the actual prices, this section has had a fluctuating performance between 1990 to 1995 but, with a notable increase in level of output from 1993. But, as shown in Figure 2, when based on 1990 prices, the annual output has increased between 1988 and 1994 with a slight retardation in 1991 followed by another decline in 1995. The fall continued throughout 1996 and a further two years of decline have been anticipated by Construction Forecasting and Research (CFR) before recovery commences in 1998. On the whole, the performance of this sector has been satisfactory particularly during 1992 at £5102m indicating a 12.9% change from the previous year.

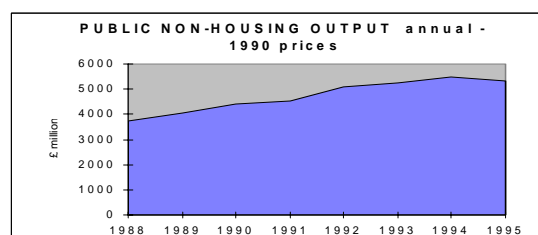
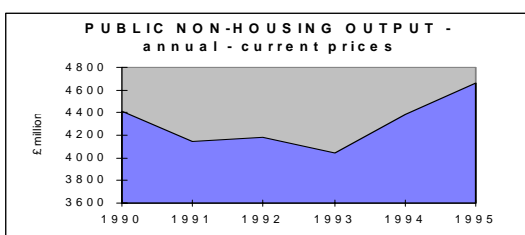


Figure 1. Public non-housing: current prices

Figure 2. Public non-housing: 1990 prices

Source: DoE; Housing & Construction Statistics

The review of the orders reveals no coherent relationship between the orders and output in the sector. The significant increase in 1992 and 1993 slowed down in 1994. But, rising prices have been identified as the reason for the reduction in orders. (CFR Spring 1995 vol. 1, issue 2).

The public non-housing is divided into 13 sub-sectors (including miscellaneous). The performance of these sub-sectors is demonstrated in Figure 3. It seems that the reallocation of capital expenditure by the government has not been balanced amongst the sub-sectors of this sector: The reductions in local authority expenditure and defence cuts have surpassed the increased expenditure in health and education.

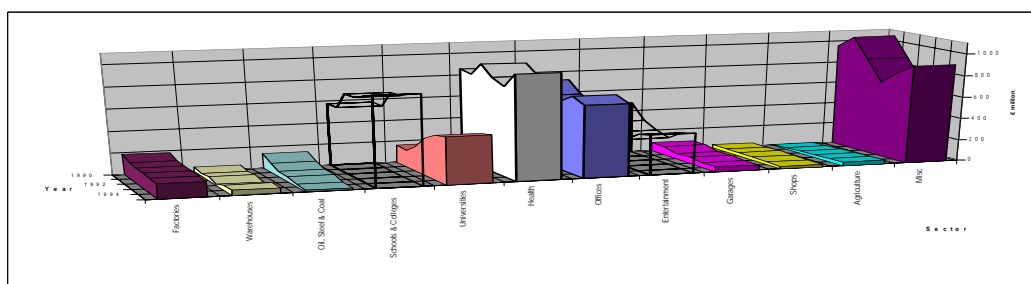


Figure 3. Sub-sectors in public non-housing; current prices

Source: DoE; Housing & Construction Services

With the exception of warehouses, health and offices where there is a delay before the orders are transformed into output, there is a parity between the level of orders and the output for other sub-sectors of this sector. With 21% share of the total, health is the most outstanding sub-sector. But, with a drop of 2% in 1991, an increase of 14.35%

in 1992, another drop of 9.1% in 1993, a further drop of 6% in 1994 and an increase of 17.5% in 1995, the output performance of health has been somewhat unpredictable.

On the other hand, the education sub-sectors have enjoyed a continuous growth in terms of both output and orders amounting to 70% and 61% growth over the 5 years period respectively. It seems that the reduction in government expenditure was offset by the introduction of private finance.

The performance of other sub-sectors is varied: most notably, oil/steel/coal and factories demonstrated a continuous decline, whereas, agriculture produced the reverse. The performance of these sub-sectors was poor in 1995 and 1996. This is in contrast with the performance of schools & colleges, universities and health, which showed improvements. Offices and entertainment experienced a decline in 1993/4 before they picked up again.

Industrial

Since 1988 when the orders peaked at £3.1 billion there was a continuous decline accumulating to a total of 42% until 1992 before it began to increase in 1993, 1994 and 1995. While there was a generous increase of £726m in 1995 orders, the performance in 1996 was less than desired. A similar behaviour was observed for the output activity, but the turning point was 1993. However, the 36.3% increase in the 1995 orders can be indicative of possible improvements in the 1997/8 outputs. The increasing competition from Europe and the increasing level of investment in Northern Ireland has been seen as a contributing factor for the unpredictable nature of the behaviour of this sector. On the other hand, these changes will have a favourable impact on the level of orders in order to meet the domestic and foreign needs.

The sub-sector analysis, given in Figure 4 and Figure 5, shows that the output and the orders follow the same trend and that factories have the largest share of the sector averaged at 74.32% and 75.41% for the 1995 output and orders respectively. The

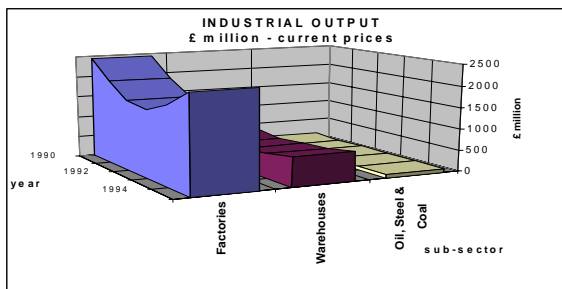


Figure 4. Industrial sub-sector output

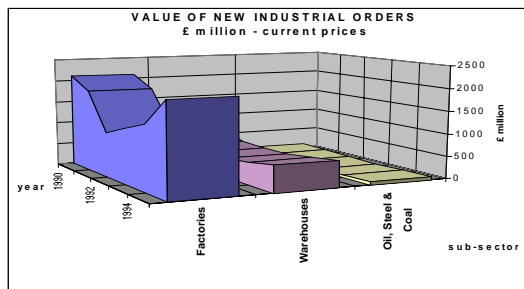


Figure 5. Industrial sub-sector orders

Source: DoE; Housing & Construction Statistics

output and orders for the factories and warehouses took an upward turn from 1993 and the growth has continued ever since, and the same is expected for the near future.

For the oil/steel/coal sub-sector, a further fall in the level of output was observed in 1995 but, a slow recovery took place in 1996 and further recovery is expected in 1997 and 1998 to account for the 49% increase in the 1995 orders.

Commercial

The commercial sector enjoyed a 300% rise during the 80's but suffered a major decline during the early 90's. The sign of recovery of the output emerged during 1993 and by 1994 the increase was 8% reaching £5,647m. The improvement continued

throughout 1995 and 1996. In preparation for the increasing output, the orders gradually picked up during 1992 and increased by 3.1% to £4,351m in 1993. The growth in orders further increased during 1994, 1995 and 1996. The 1998 outlook for this sector appears to be optimistic. However, the sub-sectors of the commercial sector are expected to perform differently.

This sector has been divided into seven sub-sectors. Figure 6, and Figure 7, show the orders and output figures relating to these sub-sectors (the retail sub-sector has been considered separately). It is evident that offices have the biggest share amounting to 45.9% averaged for 1990-94 period. A smaller figure (42.1%) describes the share of the offices in relation to total orders in this sector, but its dominating role began to diminish from 1992 onwards. In spite of the need for more office space, the actual value of the output of this sub-sector decreased from £6,043 in 1990 to £1,791m in 1994. The orders followed the same pattern, however, a slight increase in 1994 was in

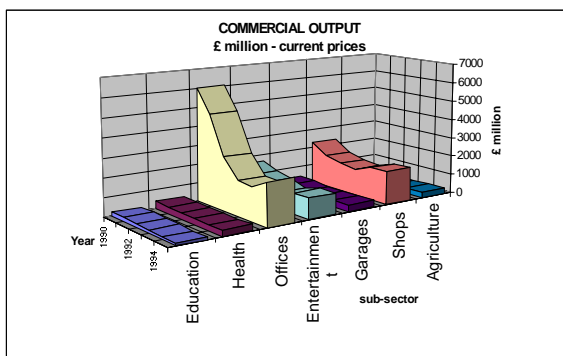


Figure 6. Commercial sub-sector output

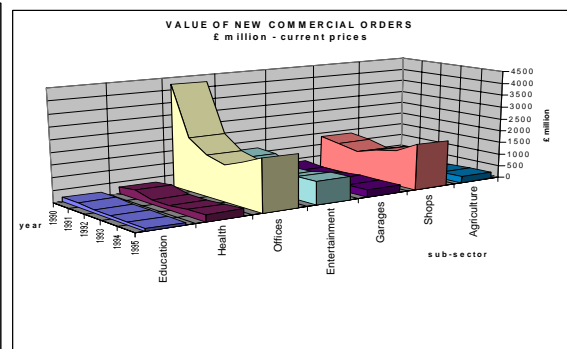


Figure 7. Commercial sub-sector orders

Source: DoE; Housing & Construction Statistics

line with the overall behavior of the commercial sector. Both, output and orders increased considerably in 1995 (25.1% and 19.5%) and 1996 (based on the first three-quarters: 18.4% and 18.9%).

The contradiction in the relationship between supply and demand of offices is the product of a number of factors many of which should be searched in the nature of the activity in the finance and commerce: e.g. the increasing number of sub-contracting, out-sourcing and employees working from home; the increasing use of IT, down-sizing and unemployment resulting from mergers and privatisations are other reasons for the reduction in the output and orders in this sub-sector. A report by CBI/Grimely (1995) indicated retardation in the employment rate in the finance and business services.

Shops and entertainment are second and third to offices in this sector. They behaved in a similar manner with their output decreasing from 1990 to 1993, recovering in 1994 and progressively increasing in 1995 and 1996. Their orders, too, followed the same pattern only the recovery came a year earlier in 1993. While education and health showed no sign of improvement until 1995, garages began recovery from 1992 and had a moderate progress all the way towards the end of 1996. The performance of agriculture has been somewhat unpredictable. As regards their orders, the random fluctuations indicate that the analysis should extend over a longer period before a pattern can be identified.

RETAIL

With a 50% reduction, the retail sector had its share of the economic decline between 1989 and 1992, after which a sharp increase followed. Despite expectations, the growth in the food retailing continued. The expansion into the overseas market and into non-food retailing has been interpreted to be the result of the saturation of the domestic market. But, there is evidence linking the expansions to the success of the domestic market: Healy and Baker (1995) suggested that some 1.3million m² of shopping center development have been planned between 1995 and 1998.

The spread of retail development has taken an outward direction: against government's discouragement, the retailers tend to favor out-of-town developments. CBI and Grimley (1995) noted that 53% of the retailers intend to expand in out-of-town locations, whereas, the figures for town centers and suburban locations are 18% and 28% respectively.

TOTAL

Considering construction output across all sectors, it is evident from Figure 8, that after a peak at £30,763m in 1990 the decline commenced producing a trough in 1993 before the output picked-up towards 1994. The performance, based on 1990 prices produces a slightly different picture: while the current prices indicate a growth in 1995 and 1996, the values, based on 1990 prices, indicate that 1995 had a fall of 2.94% from 1994. This is also reflected in their quarterly figures –Figure 9. Also, 1996 showed no sign of improvement.

In concert with many individual sectors, the profile of the total orders follows the same as total output, but with a forward phasing of one year. Thus there is a temptation to reach a general conclusion that the behavior of orders can be used as the indicator for the behavior of the output in a year time. But, in order to be conclusive on this, more data and a through analysis are required.

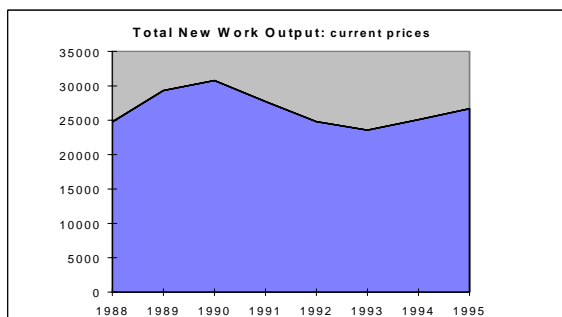


Figure 8. Total output: current prices

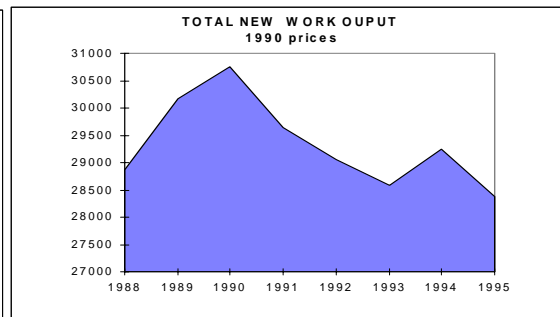


Figure 9. Total output: 1990 prices

Source: DoE; Housing & Construction Statistics

The impact of the privatisations on the ratio of private to public works, the increase in the new work and repair and maintenance, and the national and international political environments have been identified as some of the factors configuring the outlook of construction activity (CFR 1996)

CONSTRUCTION ACTIVITY IN THE NEAR FUTURE

The extent of the determining factors and the uncertainties associated with the state of these factors makes the forecast of future construction activity very difficult. The Budget decisions such as the cuts in the Housing Corporation's Approved

Development Programme, the privatisation programme and, indeed, the change of government are examples that affect the configuration of construction activity.

This section attempts to construct an indicative profile of construction activity, projecting from near past (1995) to the near future (1998), by investigating the extent and nature of the activity in various sectors. To this end, a questionnaire was sent to the property section of 1300 companies with varying size, category and geographical spread. The survey also reflects on the types of the projects and the way the projects are intended to be procured. The divisions covered consist of the following:

Heavy Engineering	Financial services	Manufacturing
Sales distribution	Engineering design	Telecommunication
Leisure	Manufacturing Wire	Car
Supermarket Equipment	Paper	Joinery
Transport	Electricity	Gas
Textiles	Clothing	Packaging Etc.

Only 78 useful returns were received and there were 51 void responses. Also, there were many responses stating “no plans” for construction work. The low number of useful returns is not a reflection of poor responses to the questionnaire. It is indicative of the level of construction activity planned by the companies in the UK.

The turnover of the companies varies from £2m to £621m with average of £628m. Their geographical spread is shown in Table 1. The table also provides detail of the extent of the construction activity in relation to the type and location of the projects.

	London	S. E.	S. W.	Midlands	North	N. Ireland	Scotland	Wales
Offices	77.2	40	168.2	51.13	87.7	2.2	36.2	5.7
Factory	4.5	17.9	121.8	132.5	172.7	1.9	10.9	3.4
Warehouse	4.1	109.5	41.6	55.7	111.9	2.1	21.1	2.1
Retail Outlet	454.5	433.65	459.4	432.9	737.1	159.7	320.7	426.2
Leisure	18	5.5	5.5	38	86.5	7	17	5.5
Others	11	3.2	10	16	21.4	0	8	2

Table 1. Geographical spread of expenditure vs. project type

Figure 10, shows the notable high level of activity in the North and low level of activity in Northern Ireland, Wales and Scotland. The outstanding revelation relates to the extent of retail projects planned to be carried out, particularly in the North. The retail expansion covers the whole of UK with less significance in the Northern Ireland. While South West has a higher share of offices, there are more plans for factory projects in the North. But the growth of offices, factories and warehouses is evident for all parts of England. The North also has the highest share of leisure that is more than twice the next in the line –Midlands.

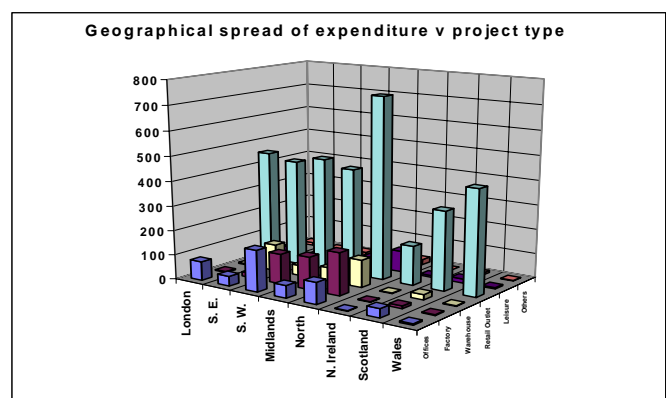


Figure 10. Geographical spread of projects

The above projects differ in terms of their operation: as shown in Table 2, the majority of the projects are refurbishment; new build and facilities management run very closely and acquisition of ready built facilities represents a low proportion of project operation. The figures are given in actual and percentage of total followed by the percentage normalised to 100%. The figures reflect the increasing level of facilities management, but, the dominating role of refurbishment is evident, which is probably due to the attention that is required for the long neglected properties. Also, the new build stays at the usual moderate level.

New Build	Acquisition of ready built facilities	Refurbishment	Facilities Management
31 (48%) [26%]	8 (12%) [7%]	53 (82%) [44%]	29 (45%) [24%]

Table 2. Project Operation: actual, (% of total) and [normalised to 100%]

In order to develop an understanding about the way the clients intend to procure their projects, the relevant information was also collected and shown in Table 3. In concert with the general trend and other research in this area, the dominating role of the traditional form is contested with the package deal/design & build which altogether have 82% of the market share. The management approaches account for 18% of projects. Also, 22% of respondents expressed plans for having representation in form of e.g. a project manager.

Traditional	Management Contracting	Construction Management	Package Deal Design & Build	Project Magt. Client's Rep.
42%	9%	9%	40%	22%

Table 3. Preferred method of Procurement

When asked to specify their in-house level of knowledge of procurement, the responses varied from none, to full. The percentage distribution of responses is displayed in Table 4. The total percentages add up to more than 100% because some respondents selected more than one option. Although a third of companies are capable of handling the whole process, nevertheless, 66.2% of them receive some expert advice.

The type, size and complexity of the project have been identified as important factors determining the level of external help. The sources of external service, identified by the respondents, consist of engineer, design team, contracts agent, letting agent, solicitor, legal advisors, 'price watchers', quantity surveyor, architect and financial manager.

Capable of Handling the Whole Process	Receive Some Expert Advice	Receive Extensive Advice	No Knowledge, handled Completely Externally
30.8%	66.2%	15.4%	4.6%

Table 4. The in-house level of knowledge of procurement

Threshold Analysis

In anticipation of the existence of a relationship between the level and area of expenditure with the size of the companies, a threshold analysis was carried out by focusing on the organisations with turnover equal or above £100m and/or total level of expenditure equal or above £10m.

Mean annual Turnover	Construction Activity; Mean Values; millions			
	1995	1996	1997	1998

£682	£26.31	£32.08	£20.83	£21.54
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Table 5. Mean Annual Turnover vs. Mean Annual Expenditure

Table 5 shows the mean values of the all turnovers and the total expenditures. Figure 11, shows the relationship between these two variable and reveals that only very low and very high total construction expenditures relate to very low and very high turnovers respectively. But, the intermediate figures shown no sign of an identifiable pattern.

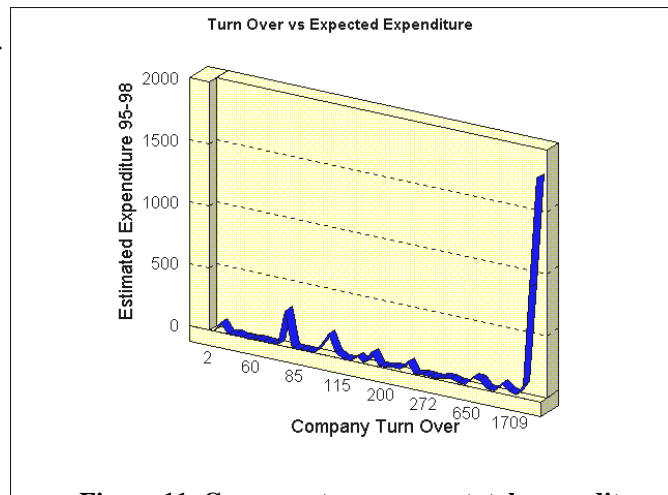


Figure 11. Company turnover vs. total expenditure

Table 6, provides the expenditure intensity of different types of project by companies with turnover above £100m and total construction expenditure above £10m. The figures in Table 6 are not significantly different from those in Table 2. This indicates that the larger companies with a high turnover or high level of expenditure will carry out the majority of the work.

TO = Turnover; EE=Expected Expenditure

		London	S. E.	S. W.	Midlands	North	N. Ireland	Scotland	Wales
Offices	TO>100m	52.2	38.75	168.2	42.9	58.4	2.2	8.2	6.2
	EE>10m	71.9	38.45	81.9	44.8	86.35	.9	35.9	2.4
Factory	TO>100m	4	17.9	91.4	127	160.55	1.9	10.9	1.9
	EE>10m	3.7	16.1	108.9	115.5	160.15	1.9	9.9	2
Warehouse	TO>100m	4.1	44.5	8.6	48.7	109.7	2.1	21.1	2.1
	EE>10m	4.1	108.5	41.6	44.1	109.1	2.1	20.1	2.1
Retail Outlet	TO>100m	454.5	417.7	458.2	429.7	444.7	159.7	319.7	425.2
	EE>10m	454.5	432.2	458.2	426.7	732.7	159.7	314.7	424.2
Leisure	TO>100m	13	.5	.5	33	71.5	2	12	.5
	EE>10m	18	5.5	5.5	38	87.5	7	17	5.5
Others	TO>100m	11	2	10	16	20	0	8	2
	EE>10m	11	2	10	16	15	0	8	0

Table 6. Threshold analysis: Geographical spread of expenditure vs. project type

Table 7, shows the distribution of project operation for turnover above £100m and for total expenditure above £10m combined and mutually exclusive. The table also shows the ranking of each operation for these three options. It is evident that the size of the turnover and/or the total expenditure has no impact on the ranking of the operation.

TO = Turnover; EE=Expected Expenditure; Figures in bracket represent % of total

New Build £M(%)			Acquisition of ready built facilities £M(%)			Refurbishment £M(%)			Facilities Management £M(%)		
TO>100 or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10	TO>100 Or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10
27(59)	22(76)	20(54)	6(13)	5(17)	5(13)	39(85)	23(79)	30(81)	24(52)	18(62)	18(49)
R A N K I N G											
2	[2]	{2}	4	[4]	{4}	1	[1]	{1}	3	[3]	{3}

Table 7. THRESHOLD ANALYSIS: Area of expenditure for companies with TO>£100m and/or EE>£10m

Again, Table 8, shows that the ranking of the preferred method of procurement is not related to the size of the company or its expenditure on construction activity. However, compared with the overall data, in percentage terms, there is a slight increase in all methods of procurement. This is probably due to the possibility that larger organisations with higher construction activity tend to explore alternative courses of action.

TO = Turnover EE=Expected Expenditure Figures in bracket represent % of total

Traditional			Management Contracting			Construction Management			Package Deal Design & Build			Project Magt. Client's Rep		
TO>100 or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10	TO>100 or EE>10	TO>100	EE>10
20(45)	13(48)	17(46)	6(13)	4(15)	4(11)	6(13)	3(11)	5(14)	19(42)	12(45)	14(38)	11(25)	9(33)	8(22)
R A N K I N G														
1	[1]	{1}	4	[4]	{4}	4	[5]	{5}	2	[2]	{2}	3	[3]	{3}

Table 8. THRESHOLD ANALYSIS: Preferred method of Procurement for companies with TO>£100m and/or EE>£10m

Obviously, each organisation has its distinct characteristics, hence, requires an individual consideration. For instance, the hygiene provisions, for the food processing/manufacturing organisations demand specialist knowledge not dependent on interpretation of requirements. With the increasing knowledge and experience of the client, they tend to exploit various methods of procurement. According to one respondent, the traditional method is preferred where time allows, whereas, management contracting is used where speed and reliability is important. This organisation uses package deal/design & build for when a third party developer is involved. Also, the size and the type of the project are a determining factor. In one instance, package deal is used for new build and design & build is used for small new built and refurbishment work of up to £0.5million. Another respondent notes that, because of low level of funding, project management/client's representative is preferred. Other factors considered important include the level of design requirement.

CONCLUSION

The review of the historical data relating to construction activity, in the recent years, revealed that while different sub-sectors behaved differently, the overall performance has not been very promising when figures are adjusted to 1990 prices. However, the outlook is forecasted to show improvements. This is also reflected in the outcome of the survey of the future construction activity in the UK.

The survey shows that the activities planned for the near future are considerably dominated by the retail. This is followed by offices at a much lower amount but nevertheless significant. This is applicable to all geographical areas, however, the North has the highest share of this growth.

It is also evident from the survey that with the exception of London, other parts of England will enjoy a prosperous future particularly in retail, factories, warehouses and office developments. However, discarding retail, the same can not be said about Northern Ireland, Wales and Scotland.

The threshold analysis focused on the organisations with turnover above £100m and/or total construction expenditure above £10m. The analysis showed no significant difference in the profile of activities and the nature of projects, indicating that the larger organisations will dominate the market.

As far as the operation of the projects is concerned, the level of refurbishment is considerably higher than new build, but facilities management is noticeably close to new build. Again, the traditional and design & build remain as the more popular form by which the clients intend to procure their projects and nearly one fifth of clients choose to be represented by e.g. a project manager.

Finally, the work showed that only 4.6% of clients rely completely on external advice on running the project. Nevertheless, two thirds of them receive some expert help.

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