

KEY CHARACTERISTICS OF SMALL CONSTRUCTION FIRMS: A UNITED KINGDOM PERSPECTIVE

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The International Council for Research and Innovation in Building and Construction (CIB) Task Group (TG) 65 – Management of Small Construction Firms has the following objectives: define the concept and scale of ‘small construction firm’ activity in various country contexts; identify generic antecedents to the successful management of small construction firms, as well as discern country-specific drivers and constraints; and, focus on developing appropriate methodologies for the study of management of small construction firms. This paper reports the UK part of an ongoing international survey and series of workshops to investigate the principal characteristics and scale of small construction firms in different countries. First, the work of TG65 is briefly described. Second, the UK position is articulated – including the definition of small construction firms, their number and turnover. Finally, generic methodology lessons for CIB TG65 are proposed.

KEYWORDS: small construction firms; research methodology

1.0 INTRODUCTION

1.1 Background of the CIB TG 65

Small construction firms play an increasingly important part in improving the overall performance of construction industries across the world. The growing role of small construction firms is evidenced in the United Kingdom (UK), for example, with 99.8% of construction firms having less than 50 staff (BERR, 2006). This construction industry structure is reasonably uniform across all developed countries, with the proportion of small firm activity being even more pronounced in developing countries. In addition, construction projects typically draw together a significant number of diverse small and large construction firms with varying collaborations (Betts and Wood-Harper, 1994). It is acknowledged that large firms’ performance is significantly impacted by their small supply chain partners’ performance (e.g. Egan, 1998; Latham, 1994). The small construction firm activity of construction industries is, therefore, not only significant in its own right, but also plays an instrumental role in the performance of large construction firms and supply chains. The successful management of small firms, however, is often plagued by their inherent characteristics; in particular, limited staff capacity and capability, scarce time and resources for innovation; excessive influence of owner-managers, and difficulty in raising finances and maintaining adequate cash flows. The challenge to the industry is the development of

business strategies, organisation of work, technologies and human resources which are appropriate to the characteristics and needs of small construction firms in different country contexts. Addressing this challenge is the focus of the International Council for Research and Innovation in Building and Construction (CIB) Task Group (TG) 65 - Management of small construction firms.

1.2 Aims and objectives of the CIB TG 65

The aim of this Task Group is to:

- bring together the experience and expertise of researchers and practitioners who would not have otherwise interacted with each other;
- develop, share and disseminate appropriate research methodologies, and organisation and management theory and practice with regard to the successful management of small construction firms within the CIB network membership and to the wider international academic and industry communities; and,
- encourage and enable new collaborative, multi-disciplinary research activity to take place through the establishment of a critical mass of interested and diverse researchers and practitioners.

The specific research objectives are to:

- define the concept and scale of ‘small construction firm’ activity in various country contexts;
- identify generic antecedents to the successful management of small construction firms, as well as discern country-specific drivers and constraints; and,
- focus on developing appropriate methodologies for the study of management of small construction firms.

1.3 Background of the project

The TG 65 has a three-year programme (as set out in the TG 65 programme and deliverables [1]). Since its launch in October 2005 in Rome, Italy, it has undertaken a number of meetings / workshops to address its specific aims and objectives (see Section 1.2 above). In response to TG65 aims and objectives, an ongoing international survey of the principal characteristics and scale of small construction firms in different countries is carried out. It is agreed that each TG 65 member to produce a paper from his/her countries perspective, which, collectively, will feed into the questionnaire design. Survey design will be developed, and discussed / signed off at the next TG65 meeting in the CIB Joint International Symposium 2008 in Dubai, 15th – 17th November 2008. Indicative issues to be covered were identified as follows:

- Definition of small construction firms (e.g. number of employees, turnover and legal identity)

- Structure of industry (e.g. what percentage of firms are ‘small’ in individual countries’ construction sectors)
- Key contexts / pressures facing small construction firms (e.g. key public policies, staff / skill shortages and procurement practices)
- Relevant role of information and communication technologies (ICTs)
- Sampling strategy for survey

This paper reports the UK part of this international survey.

2.0 THE UK POSITION

2.1 Definition of micro, small and medium-sized enterprises (SMEs)

There is no single official definition of a small firm in the UK. Currently there are two principal classifications in the UK which are described below.

1. The Companies Act 1985

According to the Companies Act 1985 definitions [2] for a SME in relation to compulsory audit thresholds, a company (or group) qualifies as a small or medium-sized company (or group) if it meets two out of three criteria relating to turnover, balance sheet total and number of employees in its first financial year, or in the case of a subsequent year, in that year and the preceding year (see Table 1). For example, the audit exemption conditions are met if a company qualifies as small;

- it employs fewer than 50 staff and has a turnover of not more than £5.6 million;
- it employs fewer than 50 staff and has a balance sheet total of not more than £2.8 million; or,
- it has a turnover of not more than £5.6 million and a balance sheet total of not more than £2.8 million.

2. Department for Business, Enterprise and Regulatory Reform (BERR)

The UK Department for Business, Enterprise and Regulatory Reform (BERR), defines the size of a firm by using number of employees (see Table 1). The BERR defines:

- micro companies as having less than 10 staff;
- small companies as having less than 50 staff;
- medium companies as having between 50 and 249 staff; and,
- large companies as having 250 staff and over.

Table 1 shows a summary of UK SME definitions. In general, statistical definitions of an SME use one (BERR) or more of three defining measurements (the Companies Act 1985): number of employees; turnover; and, size of the balance sheet. There is significant consensus that ‘a small firm’ is defined as having less than 50 staff. In addition, it was found the use of turnover and/or balance sheet total were a key distinguishing factors.

Table 1: A summary of UK SME definitions

UK SME definition	Size definition	Number of employees	Turnover	Balance sheet total
The Companies Act 1985	Small company	not more than 50	not more than £5.6 million	not more than £2.8 million
	Small group	not more than 50	not more than £5.6 million net (or £6.72 million gross)	not more than £2.8 million net (or £3.36 million gross)
	Medium-sized company	not more than 250	not more than £22.8 million	not more than £11.4 million
	Medium-sized group	not more than 250	not more than £22.8 million net (or £27.36 million gross)	not more than £11.4 million net (or £13.68 million gross)
Department for Business, Enterprise and Regulatory Reform (BERR)	Micro firm	0-9 employees	N/A	N/A
	Small firm	0-49 employees (includes micro)	N/A	N/A
	Medium firm	50-249 employees	N/A	N/A
	Large firm	With 250 employees and over	N/A	N/A

2.2 Structure of industry

The UK construction industry constitutes about twenty-one per cent of the total enterprises and employs in excess of two million people in the UK (BERR, 2006). This position is summarised in Table 2. The dominant role of small construction firms within the UK is evidenced by 99.8% of UK construction companies having less than 50 staff, employed 74.2 % of total construction workforce (BERR, 2006).

Table 2: Number of enterprises, employment and turnover in the private sector (including public corporations and nationalised bodies) by number of employees

Categories		Total (=100%)	Size (number of employees) (%)				
			None ^{*1}	1-9	1 - 49	50 - 249	250 +
Businesses	All industries	4,466,700	73.0	22.5	26.2	0.6	0.1
	Construction	920,780	86.3	11.9	13.5	0.2	0.0
Employment (/ 1,000)	All industries	22,402	15.9	16.6	31.2	11.7	41.1
	Construction	2,010	41.1	18.4	33.1	9.1	16.7
Turnover (/ £ million, excluding VAT)	All industries	2,613,907	7.9	14.7	29.2	14.8	48.1
	Construction	218,738	22.9	17.1	32.5	12.2	32.4

Source: BERR Enterprise Directorate Analytical Unit (2006, Table 3 UK Industry Summary and Table 5 UK Divisions)

[Note] ^{*1}: "None" comprises sole proprietorships and partnerships comprising only the self-employed owner-manager(s), and companies comprising only an employee director.

2.3 Key contexts / pressures facing small construction firms

There is agreement that small firms' management is constrained by intrinsic problems which large firms do not have. Specific issues raised in the literature on small firms are as follows.

2.3.1 The role of the owner(s)/manager(s)

The manager(s)/owner(s) of small construction firms have been found to have a pivotal role in decision making processes (e.g. Lu and Sexton, 2006; Sexton and Barrett, 2003; Miozzo and Ivory, 1998; Hankinson *et al.*, 1997). This is consistent with Storey (1994) and Chaganti *et al.* (1995), arguing that each small firm is unique and very much reflects the personal characteristics of the company owner.

2.3.2 Company structure

Many small firms lack clear formal structures and recording procedures compared to large firms (e.g. Gurran and Blackburn, 2001). Management of small firms tends to come about in very fluid, informal ways. For example, one of the main ways of communicating information is via informal face-to-face discussions between individuals which mean that there generally no printed copies. Thus the challenge for research within construction SMEs is that the source of data must rely almost exclusively on staff.

2.3.3 Resource limitations

The issue of resource limitations of small firms compared to large firms has been highlighted in the literature (e.g. Robinson and Pearce, 1984; Rothwell and Zegfeld, 1982). They depict that small firms lack the necessary resources (such as finance, staff and time) to engage in

strategic planning, and instead focus on operational aspects geared primarily to survival on a day-to-day basis. This limitation is particularly hard felt with respect to workforce development opportunities and training. Small firms can have difficulty in raising finance and maintaining adequate cash flow which can result in limited scope for capital or ongoing investment in appropriate staff training and research and development. The Chartered Institute of Building (CIOB, 2005), for example, argue that the majority of building firms rely on a nominally self-employed labour force and these self-employed workers are not in a position to be able to invest in their own training. In addition, small firms have scarce time and resources to allocate to external interaction. This limits the flow and amount of information on which to have discussions. Various studies have illustrated the importance of networking in small construction firms (e.g. Sexton *et al.*, 2006).

2.3.4 Family-owned small businesses

Family-owned small businesses constitute a large proportion of the overall small business population in Britain. The UK Small Business Service (SBS) (2006, p. 187), for example, indicate that “71% of businesses owners described their business as a family-owned one.” The implication of this is that family businesses are important contributors to construction SMEs. Cromie and O’Sullivan (1999, p. 77), argue that “a person who is a member of the family which owns a family business will be in a privileged position compared to non-family personnel and this can facilitate career development.” It is argued that the owner of the firms would be more keen to mentor and offer management opportunities to their own family.

2.4 Relevant role of ICT

There is agreement that information technologies (IT) or information and communication technologies (ICTs) play a significant role in the reduction of construction cost (e.g. Latham, 1994). However, there is a dearth of reliable statistics of ICTs investment or the value-add of ICT in UK construction SMEs. It has been argued that the level of IT or ICT employed by construction SMEs is very much limited to CAD, e-mail applications and word processing (e.g. Love *et al.*, 2001). The research conducted by Hari *et al.* (2005), revealed that the limited use of IT in the construction industry is due to lack of investment; lack of time to learn; and, the lack of awareness of the benefits of transforming knowledge into explicit knowledge.

3.0 GENERIC METHODOLOGY FOR CIB TG 65 PROJECT

This section concentrates on the design and operation of the methodology used to guide the TG 65 international survey project. The structure of this section is as follows. First, the overall research process is introduced. Second, emerging issues for the generic CIB TG 65 questionnaire are proposed.

3.1 Overall research process

There are five main processes conducted in this research (see Figure 1 below). First, position papers for each country will be produced. Currently, fourteen countries are involved. Second, across country analysis for position papers will be carried out. The findings will be presented by the TG65 joint co-ordinators in the following task group meeting. The presentation will be designed to stimulate a discussion by the TG65 members

and also provide content for TG members to debate the key issues identified in the position papers. The data from this phase will be qualitative in nature. The cognitive mapping technique therefore will be used to help us to see the relationships between different ideas and perspectives emerging from position papers. This is evidenced by Eden (1992), arguing that the cognitive mapping technique allows the key concepts and relationships articulated by the researcher to be externalised and synthesised in a clear layout that facilitates critical enquiry and reflection. Therefore, 'Decision Explorer' software package (cognitive mapping tool) will be used. In addition, the CIB TG 65 website [1] will be used as a main information-sharing platform where its members can share and exchange their ideas. The CIB TG65 website is currently maintained by its joint co-ordinators. Third, the generic questionnaire for the survey will be developed and signed off by TG65 members. It is agreed that the survey questionnaire will be written in English. Fourth, an international survey will be conducted. On-line survey method will be used in this research. This survey will be distributed through the CIB website. Through this channel, we hope, we will have better opportunities to get broad view across the world. Finally, across country analysis will be carried out. It is expected that a 'cross-country analysis and synthesis' report will be produced. This report will be co-authored by each country lead contact person. The data from on-line questionnaire survey will be quantitative in nature. The quantitative data captured from the questionnaires will be only analysed to establish statistical means and present the findings in graph form to enable the relative importance of factors to be identified and compared more easily. Methods used for analysis will include descriptive statistics and selected statistical testing.

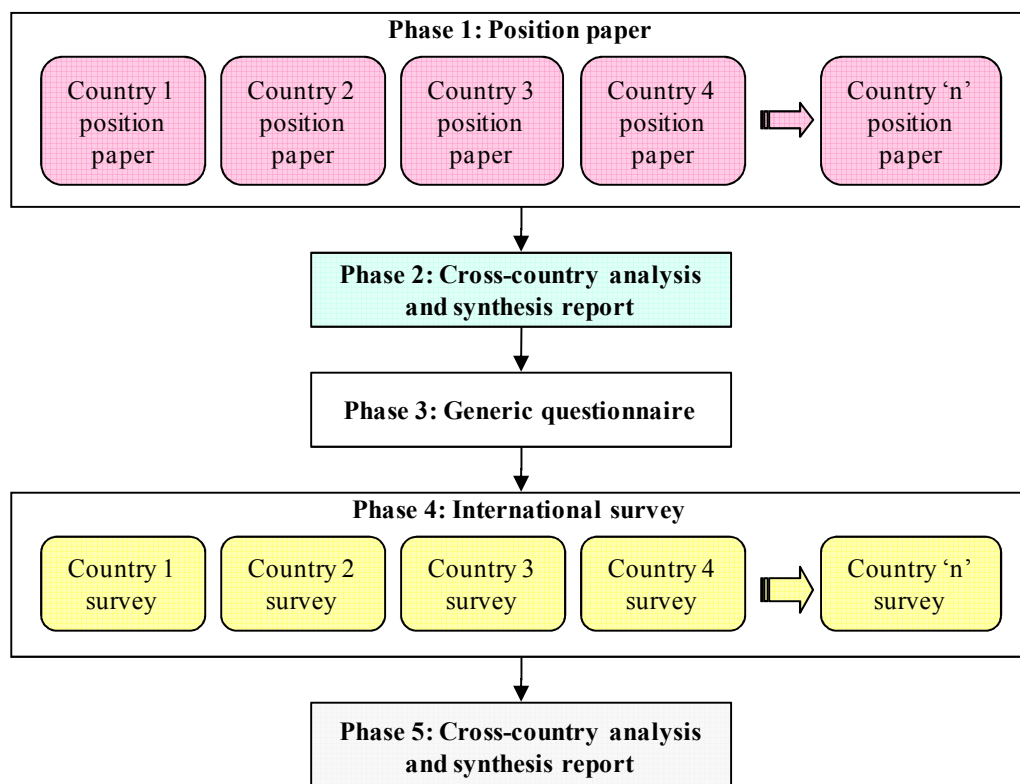


Figure 1: CIB TG 65 project overall research process

3.2 Emerging issues for the questionnaire

The UK perspective identifies the following as fruitful issues for investigation through the questionnaire phase.

1. Company size (see Section 2.1)

No. of employees: _____; Annual turnover: _____; Balance sheet total: _____

2. Ownership of the company (see Section 2.3.1 and 2.3.4)

- Subsidiary (Controlled by a parent company) Family-owned business
- Proprietary (with owner managers) Other (Please specify) _____
- Private (owners separate from management)

3. Company Structure (see Section 2.3.2)

- Investors in People (IiP) accreditation Total Quality Management (TQM)
- ISO 9001 accreditation Other (Please specify) _____

4. Human resource management (see Section 2.3.3)

4.1 Networks

- Engagement with industry initiatives (e.g. Rethinking Construction agenda)
- Engagement with Government support programmes (e.g. Movement for Innovation (M4I) demonstration projects)
- Other (Please specify) _____

4.2 Current training provision

- No training Rarely Occasionally Quite often Frequently

5. ICT infrastructure (see Section 2.4)

- Internet infrastructure E-mail E-commerce Other (Please specify) _____

4.0 CONCLUSION

The paper has set out the rationale and objectives of CIB TG 65 - 'Management of Small Construction Firms.' A review of the principal characteristics and scale of small construction firms in the UK was presented. Emerging issues for the generic CIB TG 65 questionnaire were identified.

NOTES

- [1] Fuller details of CIB Task Group 65 (e.g. programme and deliverables) can be accessed at <http://www.buhu.salford.ac.uk/CIBTG65/>.
- [2] Thresholds for Small and Medium-sized Companies and Groups, URN No: 05/1973, (available at <http://www.berr.gov.uk/bbf/financial-reporting/acc-audit-developments/page16361.html>, assessed on 7th February 2008)

REFERENCES

- Betts, M. and Wood-Harper, T. (1994), "Reengineering Construction: A New Management Research Agenda", *Construction Management and Economics*, 12, pp. 551-556.
- Chaganti, R., DeCarolis, D. and Deeds, D. (1995), "Predictors of Capital structures in Small Ventures", *Entrepreneurship Theory and Practice*, 20 (2), pp.7-18.
- Chartered Institute of Building (CIOB) (2005), *CIOB Reveals Results from Skills Shortage Research* (available at: <http://www.prnewswire.co.uk/cgi/news/release?id=151701>).
- Cromie, S. and O'Sullivan, S. (1999), "Women as Managers in Family Firms", *Women in Management Review*, 14 (3), pp. 76-88.
- Department for Business, Enterprise and Regulatory Reform (BERR) (2006), *SME STATISTICS 2006*, BERR: Enterprise Directorate Analytical Unit (available at <http://stats.berr.gov.uk/ed/sme/>).
- Eden, C. (1992), On the nature of cognitive maps, *Journal of Management Studies*, 29, pp. 261-265.
- Egan, J. (1998), *Rethinking Construction: Report of the Construction Task Force on the Scope for Improving the Quality and Efficiency of UK Construction*, DETR: London.
- Gurran, J. and Blackburn, R. A. (2001), *Researching the Small Enterprise*, 1st ed, Sage Publications: London.
- Hankinson, A., Bartlett, D. and Ducheneaut, B. (1997), "The Key Factors in the Small Profiles of Small-Medium Enterprise Owner-Managers that Influence Business Performance: The UK (Rennes) SME Survey 1995-1997 An international Research Project UK Survey", *International Journal of Entrepreneurial Behaviour & Research*, 3 (3), pp. 168 - 175.

Hari, S., Egbu, C. and Kumar, B. (2005), "A Knowledge Capture Awareness Tool: An Empirical Study on Small and Medium Enterprises in the Construction Industry", *Engineering, Construction and Architectural Management*, 12 (6), pp. 533 – 567.

Latham, M. (1994), *Constructing the Team*, HMSO: London.

Love, P.E.D., Irani, Z., Li, H., Tse, R.Y.C. and Cheng, E.W.L. (2001), An Empirical Analysis of the Barriers to Implementing E-commerce in Small-Medium Sized Contractors in the State of Victoria, Australia, *Construction Innovation*, 1(1), pp. 43–54.

Lu, S. and Sexton, M. (2006), "Innovation in Small Construction Knowledge-Intensive Professional Service Firms: A Case Study of an Architectural Practice", *Construction Management and Economics*, 24, pp. 1269-1282.

Miozzo, M. and Ivory, C. (1998), *Innovation in Construction: A Case Study of Small and Medium-sized Construction Firms in the North West of England*, Manchester School of Management, UMIST: Manchester, UK.

Sexton, M.G. and Barrett, P.S. (2003), "Appropriate Innovation in Small Construction Firms", *Construction Management and Economics: Special Issue on Innovation in Construction*, 21, September, pp. 623-633.

Sexton, M., Barrett, P.S. and Aouad, G. (2006), "Motivating Small Construction Companies to Adopt New Technology", *Building Research and Information*, 34 (1), pp. 11-22.

Small Business Service (SBS) (2006), *Annual Survey of Small Businesses: UK 2004/05, March*, Department of Trade and Industry, SBS (available at <http://www.berr.gov.uk/files/file38251.pdf>).

Storey, D.J. (1994), *Understanding the Small Business Sector*, Routledge: London.

Robinson, R. and Pearce, J. (1984), "Research Thrusts in Small Firm Strategic Planning", *Academy of Management Review*, 9, pp. 128-137.

Rothwell, R. and Zegfeld, W. (1982), *Innovation and the Small and Medium Sized Firm*, Printer: London.