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FACTORS AFFECTING THE MANAGEMENT OF MICRO-CONSTRUCTION ENTERPRISES

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Micro-construction enterprises (McE's) account for a significant proportion of all businesses that make up the industry's delivery mechanism and yet, they are poorly understood in terms of management development and day-to-day operation. The role of micros is seldom discussed in the literature, and policy initiatives aimed at bringing about change within the industry generally target the larger organisations without considering the impact on, or of, the micros. This paper discusses factors found to be significant in the development and management of the micro-construction enterprise and also the strategic issues facing a number of the micro-construction enterprises found in west-central Scotland.

Keywords: business drivers, organisation size, supply chain.

INTRODUCTION

Micro-construction enterprises (McE's) make up about 98 percent of all construction enterprises in the UK, provide some 60 percent of the employment and account for around 40 percent of the total turnover of the UK construction industry (DTI, 2007). Sommerville and McCarney (2003) have shown how the majority of the projects delivered in today's construction environment rely significantly on McE's for their success. It is not uncommon for up to 90 percent of the project value in construction projects to be sub-contracted (Lehtonen, 2001; Thomas, 2007) with McE's invariably carrying out this significant proportion of the industry's total work. These micro-enterprises, as sub-contractors, play an important role in the broader UK construction industry and this would suggest that the McE's might have a significant voice in the proceedings of the industry. However, this is not borne out in reality. Dainty *et al.* (2001) suggest that smaller enterprises have had little involvement with the development of supply chain performance improvement.

DEFINING WHAT A MICRO-ENTERPRISE IS

In general, enterprises are placed within different cohorts such as 'small to medium enterprises' (SME's) or 'large' enterprises, based on their quantitative and qualitative characteristics. Quantitative: based on criteria such as employment, turnover, and asset size, which vary by industry and country: Qualitative, based on description of ownership or control of the business. Micro-enterprises are defined, quantitatively, as enterprises that employ fewer than 10 individuals and whose annual turnover or annual balance sheet total does not exceed 2 million Euros. As far back as The Bolton Committee (1971), a qualitative definition of a small enterprise was presented which construed a small enterprise as an enterprise that has, "a relatively small share of its

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market...it is managed by its owners or part owners in a personalised way. In addition the owner should be free from outside control in taking their personal decisions". Although it has to be emphasised that The Bolton Committee perceived size as being relevant to sector i.e. what is large in the built environment arena may be, by comparison, considered small in another sector of industry. This hints at a paradoxical situation whereby firms at either end of the SME spectrum are grouped together, devoid of clear logical reasoning.

Goss (1991) and Greenbank (2001) advocate that the broader grouping of SME's, who can employ up to 249 individuals, have characteristics which clearly differentiate them from micro-enterprises. This rather erroneous situation has been identified by Sommerville and McCarney (2003) when suggesting that the tendency to include micro-construction enterprises within the SME cohort does them a great injustice

The reality then would appear to be that McE's have long been undervalued, which becomes apparent when a researcher tries to source McE centric literature. Information pertaining to McE's is extremely scarce; this situation is rather perplexing, given what should be their vital role in the UK construction industry, and could be attributed to the classification of McE's within the larger cohort that is 'Small to Medium Enterprises'. The question arises as to why there has been so little research specifically focused on McE's, as the current understanding of their characteristics and operational dynamics is extremely limited.

From the above discussion it may be argued that the operation of micro-enterprises is poorly understood. If we are to understand why the McE's play so little a part in the setting of policies and strategic direction for the industry then we must consider those who own and operate the McE's, and also their aspirations.

THE OPERATION OF MCE'S

The majority of studies conducted in the area of small business performance reiterate two primary endogenous causes of small business failure: lack of appropriate management skills and inadequate capital (Hall and Young, 1991; Gaskill and Van Auken, 1993; Everett and Watson, 1998). It is fair to say that the majority of McE's are usually owned and managed by a single individual who has worked in the construction industry for an extended period of time following which s/he sets up a business with the intention of becoming financially independent.

The owner of a small business is often considered an entrepreneur and hence owner-centric factors might comprise factors which are considered essential for an entrepreneur to be successful. Indeed, Wright and Westhead (1998) suggest that entrepreneurship is a prerequisite for business survival.

Most of the research tends to group SME owner and business centric factors together, which might be due to the perception that the businesses are an extension of the founder (see e.g., Peteraf and Shanley, 1997). This assertion may be partly true in the case of McE's given that most McE's tend to be one-person enterprises (sole traders) and hence they are directly connected to the business. Arditi *et al.* (2000) in their study on business failures in the US construction industry identified budgetary issues and organisational learning as two key business centric factors which cause businesses to fail.

AIM OF THE WORK

The main aim of this paper is to prove or disprove the argument that there are a set of factors, which inhibit McE growth in the UK construction industry. This paper builds on the understanding of the simplest firm type operating in the construction industry, the McE's. McE's are an integral part of the construction industry but are often overlooked. There is a contention that the McE's are the lifeblood of the construction industry and yet often undervalue themselves or are undervalued by those in the higher echelons of the industry.

The underlying objectives of this paper are:

- Developing a robust view of the literature surrounding operation of McE's.
- Investigate the field dynamics of a range of McE's.
- Investigate the personal characteristics and drivers of McE owners.
- Investigate factors emanating within construction projects which influence McE's.
- Develop a set of findings which would help divulge key factors which affect McE performance.

The above mentioned research objectives are aimed at clearly delineating factors which promote or inhibit McE performance.

METHOD

Field interviews with a range of micro enterprises were used to provide responses to a series of questions designed to elicit views on each of the nine metrics. The responses to each of the questions relating to the metrics could quickly be gauged in terms of their fit with the ideal model. The interviews were conducted with 60 McE's (10 each of electricians, plumbers, bricklayers, joiners, painters and, fire protection specialists) all operating in west-central Scotland, with the contact list being generated through a combination of Experian, Centre for the Built Environment and Yellow Pages databases. The interviews had an underlying semi-structured form and were conducted using open-ended discussion. The answers to the field questions were processed via Content Analysis and descriptive statistics.

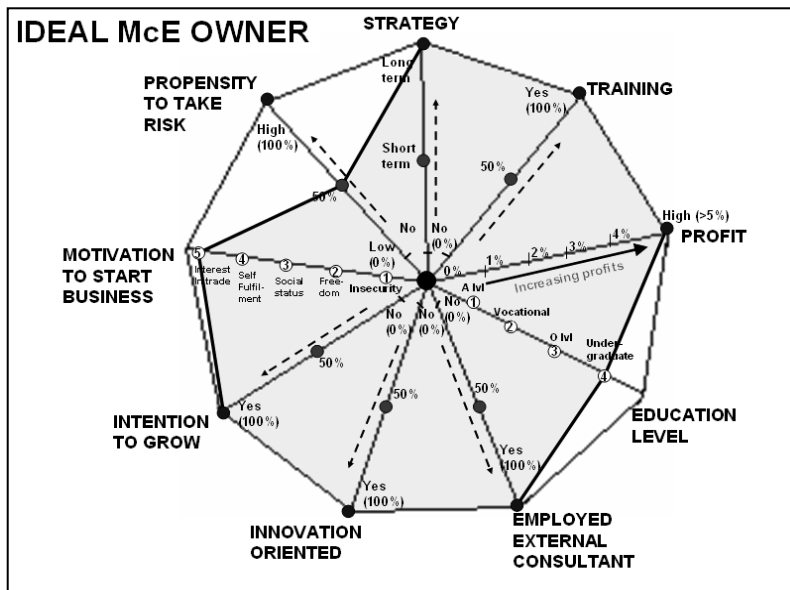
FACTORS AFFECTING DEVELOPMENT

From the material that is available, it is clear that there are a number of factors that influence the establishment, development and success of the micro-construction enterprise. After scrutiny of previous publications the following nine factors emerge from the texts as the key metrics and issues facing operational SME's, and by interpolation, micro enterprises: the propensity to take risk, the vision for the business, educational attainment, innovativeness, motivation, desire for growth of the business, the view of training, the desire for profit and, the use or external experts. What has not been given elsewhere is a view on how these factors are perceived by the micro-construction enterprise owner, and the influence of the factors on the micro-construction enterprise. This work aims to rectify this situation.

These factors can be arranged in a web diagram (Figure 1) to allow mapping of what the ideal micro-enterprise should look like and then act as a benchmark when comparison of this ideal is made with responses from a range of practitioners. From this diagram it can be seen that the 'ideal' enterprise should: take the long view,

engage in training, seek reasonable profit, have appropriate education, make use of appropriate external consultants, be innovative, intend to grow, have strong motivation to start the business and, have a propensity to take calculated risks.

Figure 1: The ideal spread.

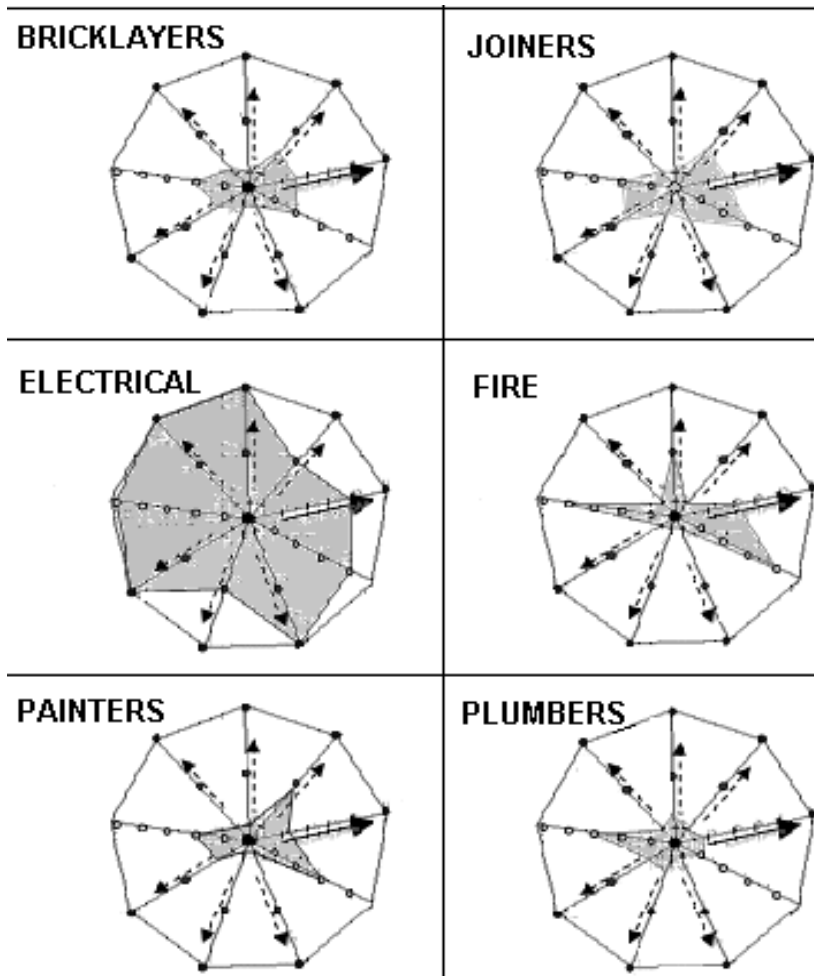


THE FINDINGS

The responses from the organisations were analysed using both descriptive and quantitative analyses. The results were then entered onto a spider diagram for each trade cohort as shown in Figure 2. From these diagrams within Figure 2 it appears that:

- The McE's accepted a low average profit percentage;
- The owners, predominantly, had vocational qualifications;
- The majority (85 percent) of the McE owners were against the idea of employing an external consultant;
- Some 90 percent of the McE owners were averse to innovation;
- The majority (73.33 percent) of the McE owners had no plans for business growth;
- Only 36 percent stated 'freedom' was the main motivation for the owner to start their business;
- Most (88 percent) of the owners were unwilling to take business related risks;
- Some 63 percent of the owners had no strategic plans for their business; and,
- The majority (75 percent) of the owners had not attended any sort of training programmes.

Figure 2: Spider diagrams for each of the trade cohorts



The findings suggest that the inclinations and perceptions sets of the McE owners do not fit well with that suggested in the ideal model. The shaded areas in the spider diagrams, Figure 2, vary in size and shape which suggests that there exists an extreme variation in the skill sets, motivations, perceptions, and inclinations of the McE owners belonging to different occupational cohorts. When each of the findings are considered:

The McE's accepted a low average profit percentage with an underlying drive for a small but consistent profit over a sustained period. Profit maximisation was not a key driver;

The owners, who predominantly, had vocational qualifications were of the opinion that they had sufficient formal qualifications as enable them to undertake their business at a level of operation that they felt comfortable with;

The 85 percent majority were against the idea of employing an external consultant, preferring to rely on their own abilities or local contacts who would provide input;

The responses show that some 90 percent of the McE owners were averse to innovation and saw change as a necessary evil but not a matter to be pursued in its own right;

Perhaps a major issue for the industry is the fact that the majority (73.3 percent) of the McE owners had no plans for business growth in any shape or form;

Some 36 percent stated 'freedom' was the main motivation for the owner to start their business and therefore the likelihood of them coming back into direct control of a larger organisation was slim; and,

The majority of the respondents (88 percent) were clearly unwilling to take business related risks, preferring to err on the side of safety, no matter how stable or traumatic the business environment may have appeared.;

CONCLUSIONS

The spider diagrams representing the McE's offering bricklaying and plumbing services had the smallest shaded area thus highlighting that the McE owners belonging to these cohorts may have minimal inclination to employ external consultants, innovate, grow, take risks and develop long-term business strategies. They were also found to have lower educational qualifications though differing in their motivations and inclination to undertake training courses. At the other end of the spectrum were the McE's offering electrical services; they had the largest shaded area highlighting that the McE owners from this cohort had a strong proclivity to employ external consultants, innovate, grow, take risks and develop long-term business strategies. They were also found to be well educated and had a genuine interest in their trade: a majority of them also undertook regular training courses. This large variation in owner's perceptions, inclinations, motivations, and skills set was also found to be

linked to their business's profitability. The McE owners with minimal inclination and skills set found themselves at the bottom of the profit ladder while those with a higher proclivity and skills set like the electricians found themselves at the top.

There is no doubt that the micro-construction enterprises play an important role in the industry, but their management and operation is poorly understood. Whilst this research has tapped into a small sample from the broad population, the findings throw up a number of issues for further detailed research and explanation e.g. the influence of relationships with main contractors has on the micro and also, the influence of the underlying supply of liquidity on the micro.

Issues arising from the research include:

- It was found that the use of the terms entrepreneur and entrepreneurship have been overemphasised within small business literature without giving due consideration to the fact that most small business owners might not be entrepreneurs. This calls for a clear segregation of small business owner types akin to what has been attempted in this study.
- There is a general conundrum in the methods, which have been adopted by researchers to analyse small business owner behavioural traits. This calls for a singular model which could alleviate the problems associated with multiple models of behavioural analysis,
- McE specific research on owner characteristics are all but absent, which calls for specific studies which would look at McE owners belonging to different occupational cohorts, regions etc., to try and decipher varying characteristics associated with McE owners.
- Studies on McE's role on construction projects were found to be rare which calls for renewed focus in this area.

- A few project centric factors, which inhibit McE growth, were identified in this study but given the affect project drivers have on McE performance an in-depth analysis of the same is required. This exercise would help decipher a host of other project centric factors, which needs to be addressed if McE's are to redress their high attrition rate.

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