cidb
Construction Industry Development Board

STUDY OF GRADE 1 CONTRACTORS



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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This report was commissioned to provide a comprehensive profile of a typical construction company registered in Grade 1 on the Construction Industry Development Board's (cidb's) Register of Contractors, identify the factors that drove them to register as contractors and establish the extent to which they are bona fide contractors. Such profiles, extending to their motivation, owner's level of education and experience, work carried out and performance to date, will help the cidb understand which of the Grade 1 contractors have the potential to succeed in the industry. It will also help the cidb understand the impact of any registration requirements or minimum criteria for the registration of such contractors.

The study was carried out through a review of the literature and relevant documentation and telephonic or face-to-face semi-structured interviews directly with the owners of 1200 construction firms. Three different categories of contractor were selected for the study: active Grade 1 contractors, Grade 1 contractors who had previously registered but had not renewed their registration (inactive) and grade 2 – 4 contractors. The study triangulated the responses of the three categories to develop a more accurate profile of Grade 1 contractors.

The report found that the typical Grade 1 construction company is actively managed by the owner, to whom the company is the primary source of income. Grade 1 contractors are mainly motivated to enter the industry mainly because of the perceived expectation of good financial returns, the perceived ease of getting work, or because they have some experience and knowledge of the industry having worked in it previously.

Most of the owners of Grade 1 construction companies have a reasonable educational background, some work experience in the industry but little construction skills and training. While before establishing their companies they felt they had a reasonable idea of what to expect as a contractor and the challenges in the industry, they subsequently feel there was a lot more they needed to learn about the industry before entry.

Most of the contractors tender for work in both in the private and public sectors and believe tendering success is primarily due to compliance with tendering requirements, ability to do the work, pricing, and luck. The majority have struggled to get work in the industry for a number of reasons, and typically rely on publicly available sources for tendering information. This exacerbates the degree of competition at this level.

Based on the findings of the interviews amongst the three categories of contractors, it is difficult to unequivocally differentiate between 'genuine' Grade 1 contractors and 'speculative' Grade 1 contractors. In time, though, there are strong indications to suggest that the 'speculative' contractors fade away and fail to renew their registration in Grade 1 after failing to get steady projects. There is little correlation between the owner's level of education, previous work experience in construction, and the reasons for entering into the industry and the contractor's propensity to survive, thrive and progress past cidb Grade 1. There is however a strong correlation between the contractor having

construction-related training or qualifications and the contractor's survival and progression, and this is the most appropriate basis for enhancing the ability of Grade 1 contractors to survive and progress to higher grades.

If there are support systems within the construction industry that support Grade 1 contractors in accessing finance; securing training in construction-related disciplines; and marketing skills then their survival rate will be greatly enhanced. As the majority of Grade 1 contractors are 'owner/ managers', interventions to uplift construction companies should be directed to these individuals. The more experienced contractors emphasise personal attributes of the owner (e.g. dedication, patience, strength and perseverance) in contractor success more than entry-level contractors. This could well be the difference in their success and progression, and should be part of any development initiatives at this level.

INTRODUCTION



1.1. OVERVIEW

This report presents the outcomes of the Study of Grade 1 Contractors carried out on behalf of the Construction Industry Development Board (cidb) by Procurement Dynamics. It provides the background and context to the study, summarises the outcomes of the review of literature and desktop data, and synthesises these with the findings of the surveys carried out amongst contractors in South Africa.

This 'Introduction' section provides the background, context and the methodology, while Section 2 outlines the findings of the contractor surveys and synthesises these with the findings of the review of literature, issued as a separate report. Section 3 then provides the study's conclusions and recommendations.

1.2. BACKGROUND TO THE STUDY

The cidb Register of Contractors was established by Section 5 (1) (d) of the Construction Industry Development Board Act (Act 38 of 2000), which required the cidb to establish a register that categorises contractors in a manner that facilitates public sector procurement and promotes contractor development. It is the sole registration and grading system for contractors in South Africa, and all contractors seeking to participate in public sector construction works must be registered with the cidb with the exception of home builders, labour-only subcontractors and suppliers. The cidb register classifies contractors in nine grades, 1 – 9, based on their capability to undertake projects (Table 1).

Table 1: Contractor classification criteria

GRADE	MAXIMUM VALUE OF A CONTRACT	LARGEST CONTRACT COMPLETED IN THE PAST 5 YEARS
1	R 200 000	No requirement
2	R 650 000	R 130 000
3	R 2 000 000	R 450 000
4	R 4 000 000	R 900 000
5	R 6 500 000	R 1 500 000
6	R 13 000 000	R 3 000 000
7	R 40 000 000	R 9 000 000
8	R 130 000 000	R 30 000 000
9	No limit	R 90 000 000

The registers are considered an essential risk management tool for public sector clients as they may only award construction contracts to registered contractors that are capable, based on the register, of undertaking the works. They indicate to potential clients the capability of contractors based on relevant criteria such as financial capacity; track record and technical capabilities.

There are no barriers to registration with the cidb, and by extension to the construction industry, as contractors at the lowest grade, Grade 1, are not required to prove their financial capability or to have a track record of completed projects in order to be registered. Instead, applicants for registration in Grade 1 are simply required to:

- pay an application fee;
- have valid company registration documentation;
- provide valid identity documents for the principals of the firm; and
- provide a certificate to show good standing in tax payments (an electrical contractors license is also required for that class of works).

In contrast, registration in cidb Grades 3 - 9 requires the contractor to provide:

- financial statements to prove financial capability; and
- proof of a track record to determine capability to carry out the works (e.g. certificates of completion or final payment certificates).

The lack of barriers to registration, and the perception that anyone can start a construction company with no skills required[1], results in a high level of entry into the industry, as evidenced by the far greater number of contractors registered in cidb's Grade 1 category compared to those in the rest of the categories. This figure is increasing: in 2007, Grade 1 contractors comprised 80% of the total registered cidb contractors, and by July 2015 this percentage had risen to 88% of the active registered contractors (Fig. 1 and Table 2 below).

Table 2: cidb contractor registration figures, July 2015

DESIGNATION	CE	EB	EP	GB	ME	SW	TOTAL
Grade 1	24,774	1,659	6,018	54,053	5,996	20,274	112,774
Grade 2	1,586	159	169	2,120	311	599	4,944
Grade 3	899	56	95	595	112	196	1,953
Grade 4	907	105	237	845	176	194	2,464
Grade 5	681	118	216	584	158	184	1,941
Grade 6	787	63	181	676	142	104	1,953
Grade 7	433	42	82	330	60	57	1,004

[1] cidb (2008). Attaining Social and Economic Deliverables, cidb inform practice note # 10, Construction Industry Development Board

DESIGNATION	CE	EB	EP	GB	ME	SW	TOTAL
Grade 8	152	11	35	121	39	38	396
Grade 9	74	2	26	47	31	24	204
Total	**30,293**	**2,215**	**7,059**	**59,371**	**7,025**	**21,670**	**127,633**

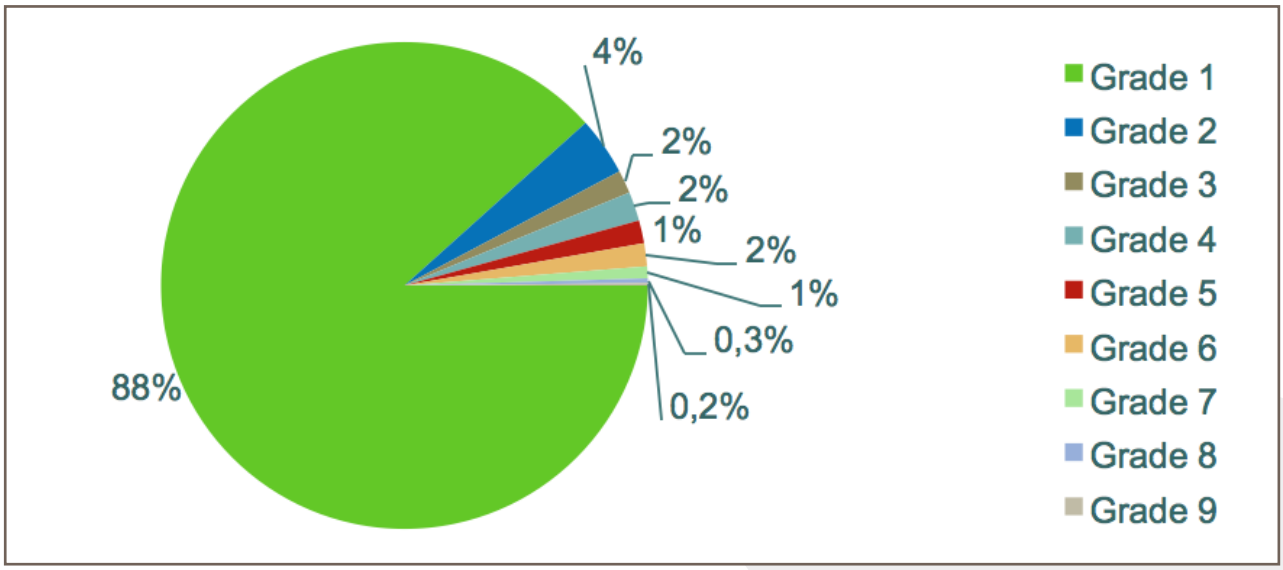


Fig. 1: Contractor registration by grade, July 2015
Source: cidb register

The number of contractors registering every year in Grade 1 has risen significantly since 2007 with a slight dip only in 2011, as shown in Fig. 2 and 3 below, and the total number of contractors registered at Grade 1 stood at just under 94,000 by mid-2014.

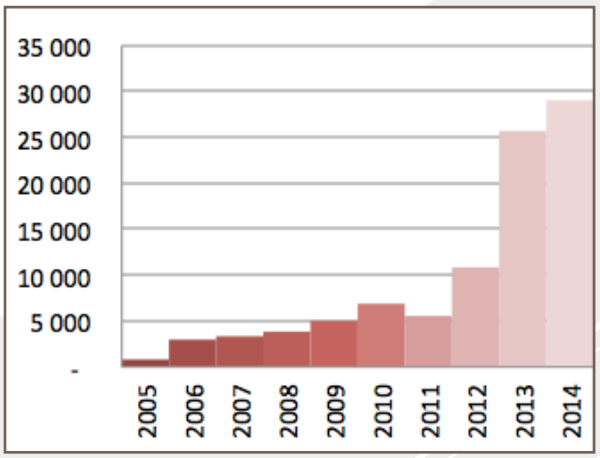


Fig. 2: Annual Grade 1 registrations since 2007

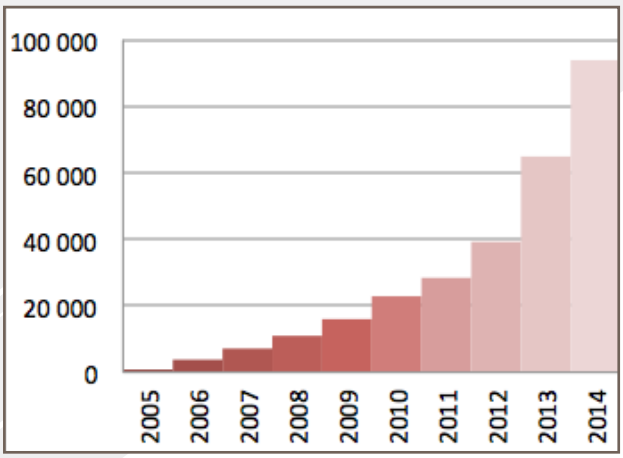


Fig. 3: Cumulative Grade 1 registrations since 2007

Another interesting statistic is the low rate of Grade 1 contractors upgrading to Grade 2 and beyond. The average rate of upgrades per year varies between 5% and 8%; it is approximately 10% for Grades 2 to 4 but is significantly lower for Grade 1 contractors, at around 3%[2] . A significant number of Grade 1 contractors therefore remained registered in Grade 1. This highlights one of the major shortcomings identified regarding the cidb contractors register; it cannot distinguish between Grade 1 contractors who have the ability and desire to grow their contracting enterprises and those that see contracting as a speculative route to additional income.

The high numbers of contractors who enter into the industry in Grade 1 and stagnate there have been attributed by many researchers to:

i. The ease of entry into the industry, resulting in inordinately high numbers of contractors and thus degree of competition at entry level;

ii. The difficulty in getting work in the industry at this level, especially given the limited number of projects available from government;

iii. Limited technical, financial, managerial and tendering skills on the part of entry-level contractors; and

iv. Generally low profit levels in the industry[3,4,5].

The high numbers of Grade 1 contractors and the limited work opportunities mean that contractors do not carry out sufficient work to enable them to move upwards to Grade 2 and higher.

Previous cidb reviews and reports have identified concerns that there are too many contractors registered in Grade 1[6], which:

- places an inordinately high burden on the cidb's administrative resources for contractor registration;
- is perceived to be inconsistent with the need to raise quality and competence in the industry;
- leads to contractor disillusionment when tenders are not obtained; and
- increases the possibility of fraudulent activities in an attempt to gain a competitive edge over other Grade 1 contractors[7].

[2] cidb (2014) Quarterly Monitor, January 2014

[3] cidb (2008). Attaining Social and Economic Deliverables, cidb inform practice note # 10, Construction Industry Development Board

[4] http://www.engineeringnews.co.za/article/too-few-contractors-moving-up-the-grades-2007-11-02

[5] Greve, N. (2014) CIDB Grade 1 offers 'no barrier' to industry entry, needs rehaul, creamer's engineering news, Apr 08, 2014, online: available http://www.engineeringnews.co.za/article/cidb-grade-1-offers-no-barrier-to-industry-entry-needs-rehaul-2014-04-08

[6] cidb (2007) 5 Year Review February of the Construction Industry Development Board, Construction Industry Development Board

[7] Greve, N. (2014) Ibid

This led to recommendations that the cidb should explore means of reducing the administrative effort required to register Grade 1 contractors, and reconsider Grade 1 entry requirements to establish a minimum criteria for the registration of such contractors without creating unreasonable barriers to entry into the public sector market of the construction industry[8]. Having such a criteria would likely increase the success rate of Grade 1 contractors, and would also make it easier for companies seeking to develop enterprises to select entities with potential. Any minimum criteria for the registration would however need to take into account that of the Grade 1 contractors currently registered, 91% are black-owned, 32% are women-owned and 26% are youth-owned. The high representation of historically disadvantaged individuals, women and youth amongst Grade 1 contractors highlights the importance of this category as a route in transformation of the construction industry.

Before any changes are recommended on the registration of Grade 1 contractors, it is important to better understand what their characteristics are; why they register; their potential to develop and grow; and the extent to which they are genuinely established construction enterprises or are opportunistic firms registered to take advantage of perceived good prospects. This would then help the cidb understand the implications of any preconditions for registration in Grade 1, and on how to best structure the register of contractors to ensure that it optimises its role as a risk assessment and contractor development tool.

This study has thus been commissioned by the cidb in order to understand the profile of companies registered in cidb Grade 1; establish the extent to which they are bona fide contractors, and identify the factors that drive a typical Grade 1 contractor to register on the cidb Register of Contractors.

1.3. OBJECTIVES OF THE STUDY

The overall objectives of this assignment were to comprehensively study the profiles of companies registered in cidb Grade 1 to establish the extent to which they are bona fide contractors, and identify the factors that drive a typical Grade 1 contractor to register on the cidb Register of Contractors. The study specifically aimed to:

i. Develop a profile of a typical Grade 1 contractor, specifically addressing:

   a. Their motivation to be in the construction industry.

   b. The number, duration and values of construction projects executed by the typical Grade 1 contractor in the past three years.

   c. The proportion between private and public sector construction work.

   d. The regular occupation of the owner(s) of the enterprise and percentage of time they spent on construction activities.

   e. The highest level of education of the enterprise owner(s) or managers; their construction related skills, qualification and experience.

[8] cidb (2007) 5 Year Review February of the Construction Industry Development Board, Construction Industry Development Board

f. Where they access information about construction tenders, and

g. The length of time the enterprise has been active in construction.

ii. Determine the extent to which companies registered in cidb Grade 1 are bona fide contractors.

iii. Identify the factors that drive a typical Grade 1 contractor to register with the cidb.

In addition, several other areas of investigation were identified including the reasons for the increasing trends in the number of Grade 1 contractors and the reasons behind the low rates of upgrading amongst Grade 1 contractors compared to other grades.

1.4. METHODOLOGY

1.4.1. OVERALL METHODOLOGY

A comprehensive review of the literature on entry-level contractors was first carried out, focusing on identifying any previous relevant studies locally and internationally for benchmarking purposes. The review also looked at cidb reports and other industry reports. It aimed to provide the necessary background and context for the study; and it also sought to identify the most appropriate methodology and data collection tools. It will also be interesting to see if the challenges identified in this study are specific to South Africa or are a global phenomenon.

The literature review provided context (sometimes counterfactual) that the study used to analyse the findings of the data collection. This is reflected in the following section, where findings of the survey are juxtaposed with the literature review.

The literature review identified, amongst others, that the dominant approaches to research on small businesses tend to examine the person under study as a variable rather than actually paying attention to that person's view and ignore the frailty of human judgement[9]. A researcher should therefore directly seek the views of micro-business operators about their reality and how decisions are made. As a result, surveys employing telephonic or face-to-face interviews directly with the owners/managers of companies that have been on the cidb register at Grade 1 were selected as the best methodology for this study.

1.4.2. RESEARCH POPULATION AND SAMPLING

To identify the characteristics of bona fide contractors, their motives for entry into the industry and staying in the industry, and their sustainability, inter alia, it was essential to interview contractors and get their in-depth responses. The study settled on semi-structured interviews as the preferred method of getting these responses. These allowed for a structured conversation that solicited all the necessary data, while allowing enough flexibility to follow up on responses requiring clarity or responses of interest. Based on the conclusions of the review of literature, the study identified three

[9] Gordon, N. S. (2000) Researching psychotherapy, the importance of the client's view: a methodological challenge, The Qualitative Report, p. 4

groups of contractors whose responses would be valuable in characterising Grade 1 contractors. These were:

- currently active Grade 1 contractor;
- contractors who had previously been registered as Grade 1 contractors but whose registration had lapsed (inactive Grade 1 contractors); and
- contractors who had previously been registered as Grade 1 contractors and were currently registered in higher grades (2 – 4).

The cidb was requested to provide the entire population of the three groups of contractors. From these lists, 400 contractors were randomly selected for each survey group. This number was based on a sample size calculation that gave a recommended sample size of 383 for each group, based on the population size (active Grade 1 contractors = 72,496, inactive Grade 1 contractors = 40,278 but the exact number of Grades 2 – 4 contractors was not possible to precisely estimate). The selected response distribution was 50%, confidence level was 95%, and margin of error was 5%. The sample sizes were then rounded up to 400 for each group of contractors.

The table below matched the research questions to the methodology selected, the respondent group and the sampling.

Table 3: The adopted methodology

RESEARCH QUESTION	METHODOLOGY	IDENTIFIED RESPONDENTS	SAMPLING
Profile of Grade 1 contractors, including: • Their motivation; • The number, duration and values of projects executed; • The proportion between private and public sector construction work; • The regular occupation of the owner and percentage of time spent on construction; • The level and type of education, skills, and experience; construction or otherwise, of the owner, operational managers; • Access to information about construction tenders, and key sources of work; • Length of active time in the construction industry.	Structured questionnaires through email and regular mail to the owners of the enterprises registered under Grade 1. Telephonic interviews using structured questionnaires.	Owners of the Grade 1 contractor enterprises.	• From the cidb register of contractors. • 400 responses (see note below). • Stratified by category of works, (CE, EB, EP, GB, ME, SW) and province.

RESEARCH QUESTION	METHODOLOGY	IDENTIFIED RESPONDENTS	SAMPLING
• Distinguish between the profile of a bona fide Grade 1 contractor and speculative Grade 1 contractor	Telephonic interviews using structured questionnaires	Owners of contractor enterprises registered in Grade 2, 3 and 4	• From the cidb register of contractors • Select 400 contractors who have progressed at least one grade over the last two years
	Qualitative, semi-structured interviews with subject matter experts	Subject matter experts from the cidb, MBA (Gauteng and KwaZulu Natal), SAFCEC and the universities	• Purposive sample of 10 subject matter experts
• Identify factors and motives that drive Grade 1 contractors to enter into and stay in the construction industry.	Structured questionnaires through email and regular mail to the owners of the enterprises registered under Grade 1 Telephonic interviews using structured questionnaires	Owners of contractor enterprises registered in Grade 1, 2, 3 and 4	• From the cidb register of contractors • Responses from: • 400 active contractors in Grade 1 and • 400 inactive contractors in Grade 1 (see note 2) • 400 active contractors who have progressed at least one grade over the last two years

1.5. RESEARCH EXECUTION

The contact details of the company representatives were identified from the lists of contractors provided by the cidb, and the respondents were then contacted and asked if they were willing to participate in the survey. Interviews were thereafter conducted telephonically or through email, for those who expressed this preference for the survey. The response rate was approximately 20%; non-responsive contractors were removed from the sampling frame and another contractor randomly selected until 1203 contractors were interviewed in total.

Telephonic and face-to-face interviews were carried out with the contacts for construction companies, obtained from the cidb database. The contacts were first requested to confirm their position in the company, and 80% were either the owners or co-owners while 18% were directors. This gives the study confidence that the information provided is likely to be well-informed and accurate.

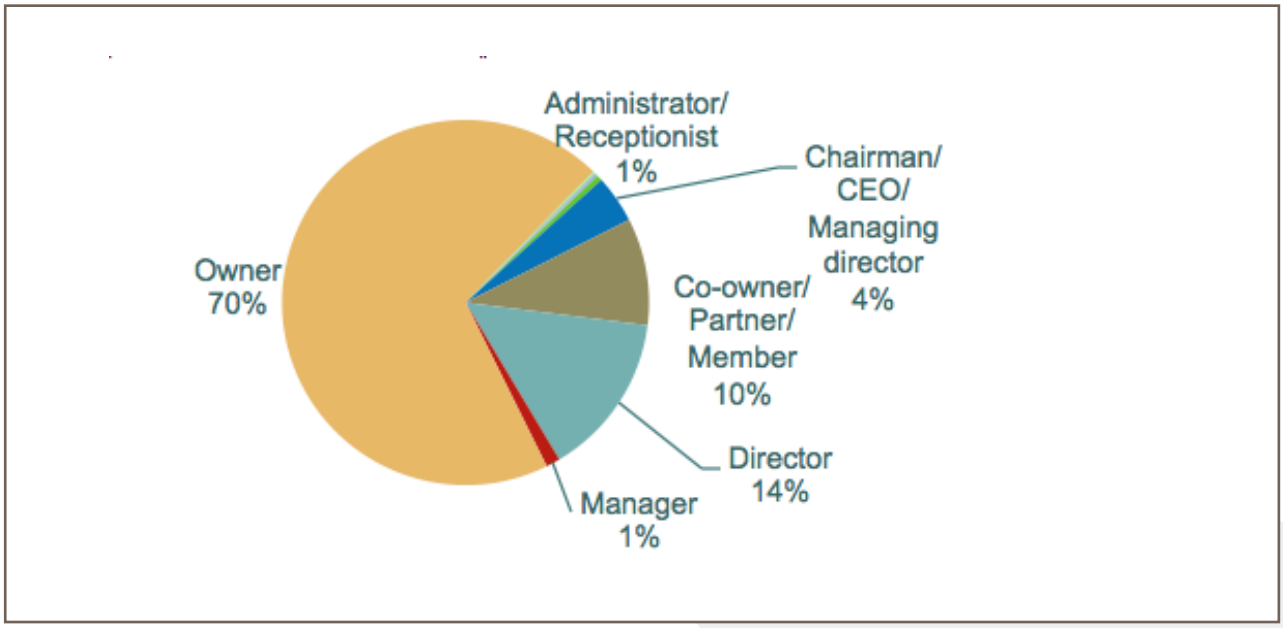


Fig. 4: Respondent's role in the firm

The responses were recorded, transcribed and analysed using Excel functions and contents analysis, and the findings and preliminary conclusions are presented in the report that follows.

2. THE FINDINGS

2.1. PROFILE OF A GRADE 1 CONTRACTOR

2.1.1. THE OWNER/MANAGER

Gender and age

The typical cidb Grade 1 contracting firm is owned by a male between 25 and 55 years old. This is as expected; the construction industry is predominantly male and the youth are under-represented because of the premium placed on experience. There is little difference between the gender profiles of active contractors in Grade 1 and in Grades 2 – 4, though there are a larger proportion of female contractors in the inactive Grade 1 group. This contradicts to a degree the reported gender ownership profile of contractors listed on the cidb Register of Contractors, which indicated that women-owned companies comprised 48% of general building contractors and 42% of civil engineering contractors in Grades 2 – 4 in total over the same period[10].

[10] cidb (2011) Research Report: Mapping the Path to Becoming a Grade 9 Contractor, cidb, Pretoria

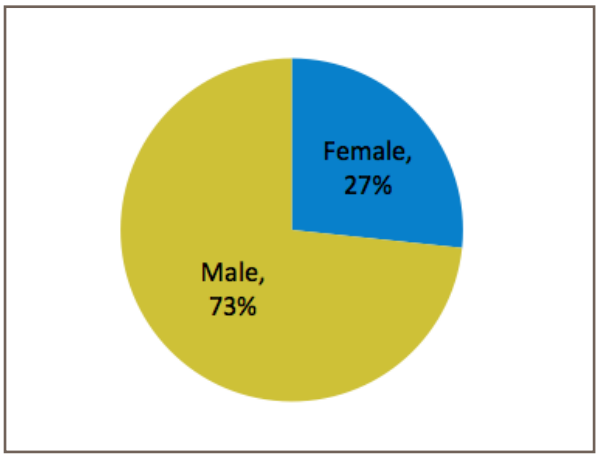
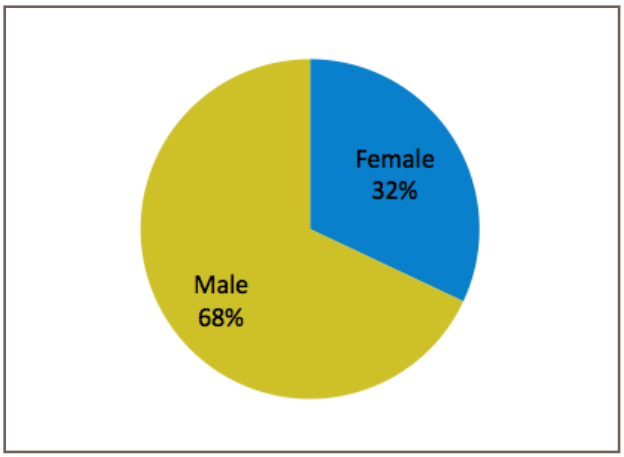


Fig. 5: Gender of Grade 1 Contractors; active



… and inactive

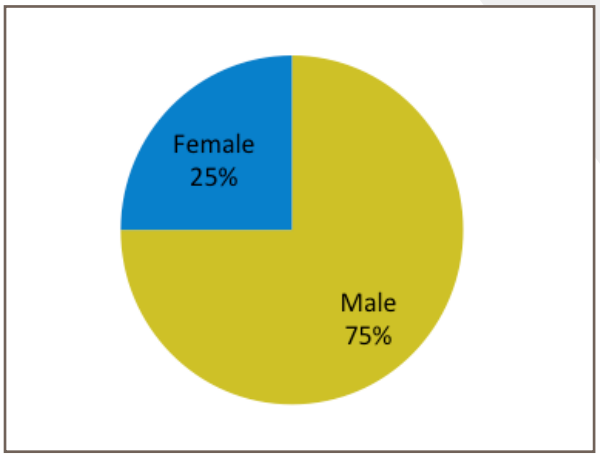
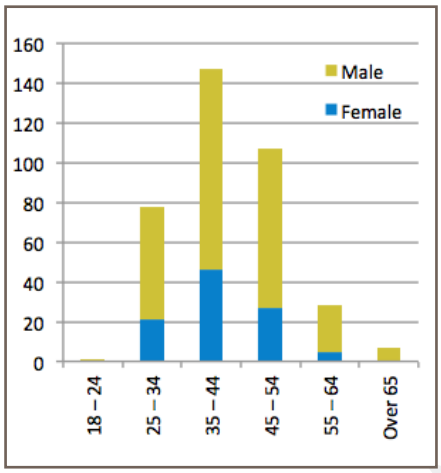


Fig. 6: Gender of Grade 2 - 4 contractors

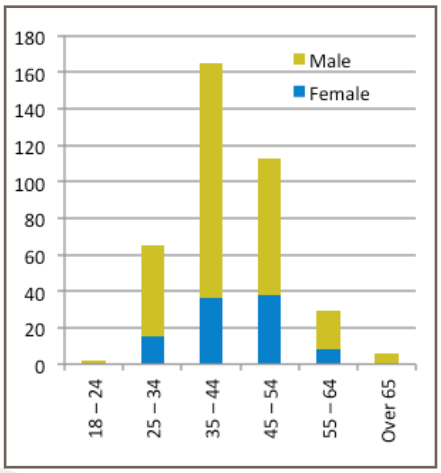
Women are more disadvantaged in construction entrepreneurship because of their generally lower levels of financial literacy and awareness; higher barriers to accessing finance; lower access to good mentors and mentorship programmes; and barriers arising from socialisation practices, educational experiences, family roles, and networking[11]. As a result, across the world there are always lower numbers of women construction entrepreneurship than there are men.

All three groups of owners show great similarity on their ages, with most owners clustered around the 25 – 54 age groups.

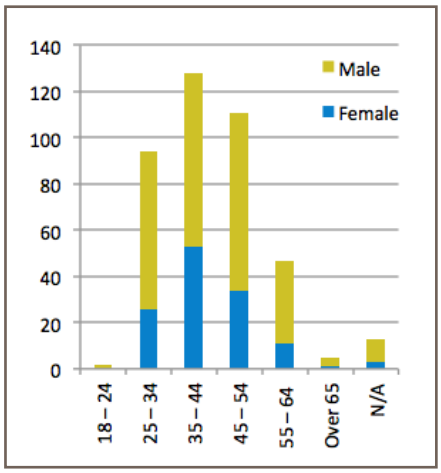
[11] Buthelezi, T. (2011) Exploring women entrepreneurship in the construction industry, unpublished MBA dissertation, North-West University, Potchefstroom



Active Grade 1 contractors



Active Grade 2- 4 contractors



Inactive Grade 1 contractors

Fig. 7: Firm owners by age

Educational qualifications

Owner/managers of the majority of Grade 1 contractors have at least grade 12 (matriculation) education, and a significant proportion also have degrees, mainly in non-construction related fields (Fig. 8). Contrary to the popular view of the Grade 1 contractors as having low educational levels, only a small number have primary or lower education. Thirty two percent of the Grade 1 contractors have a degree from a university or university of technology (5% of these in a construction field). Only 4% have primary or no schooling. This is similar to the profile of contractors in Grades 2 – 4 and the inactive contractors in Grade 1. Forty one percent (41%) of the Grades 2 – 4 contractors have a degree or diploma (13% in a construction-related field) while 31% of the inactive Grade 1 contractors have a degree or diploma (3% in construction-related discipline) as shown in Fig. 8.

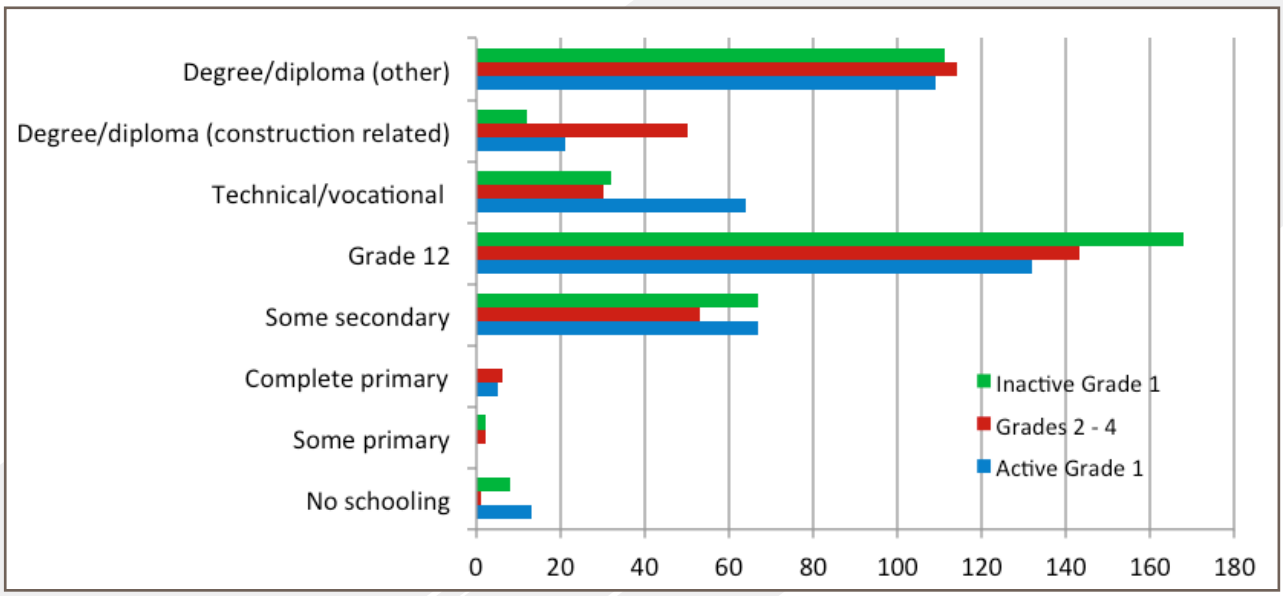


Fig. 8: Contractor's highest educational qualification

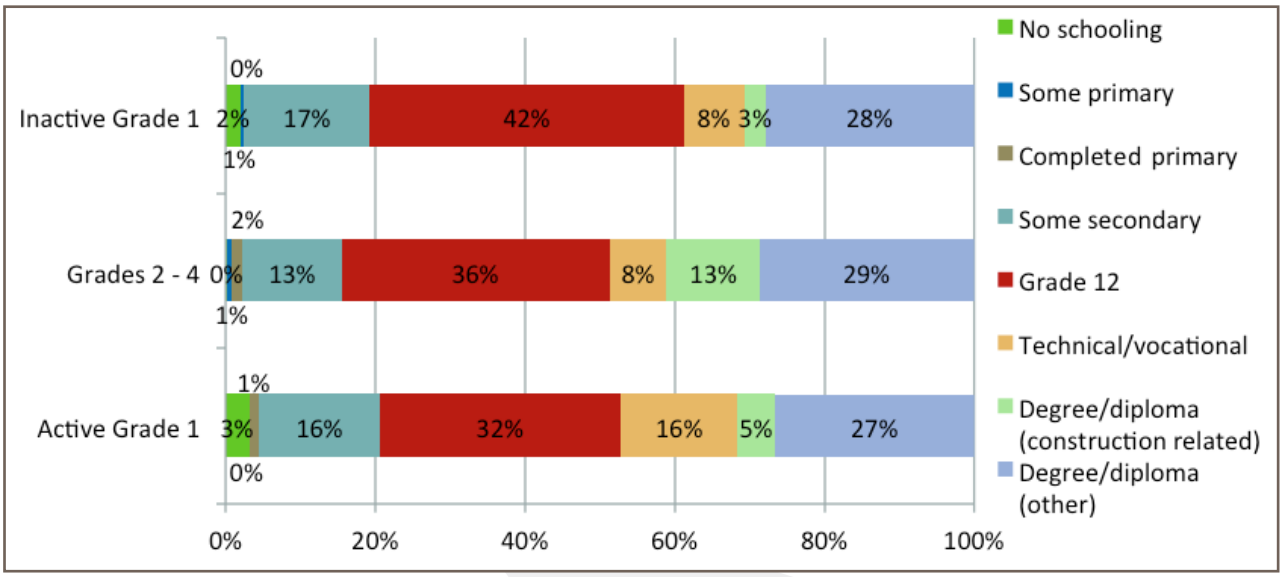
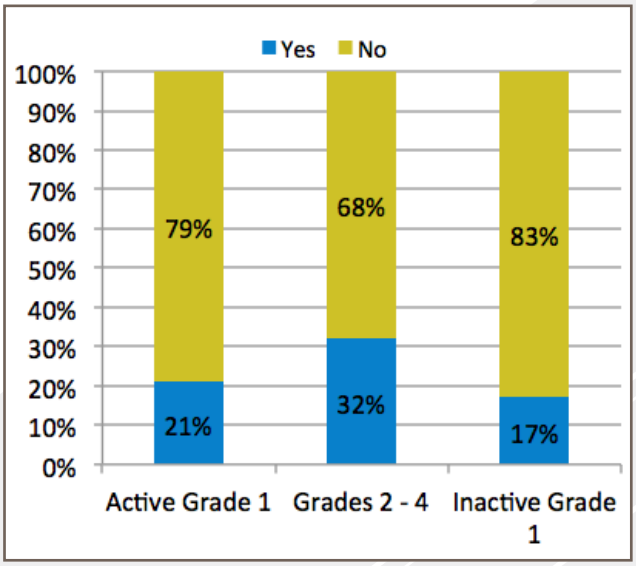


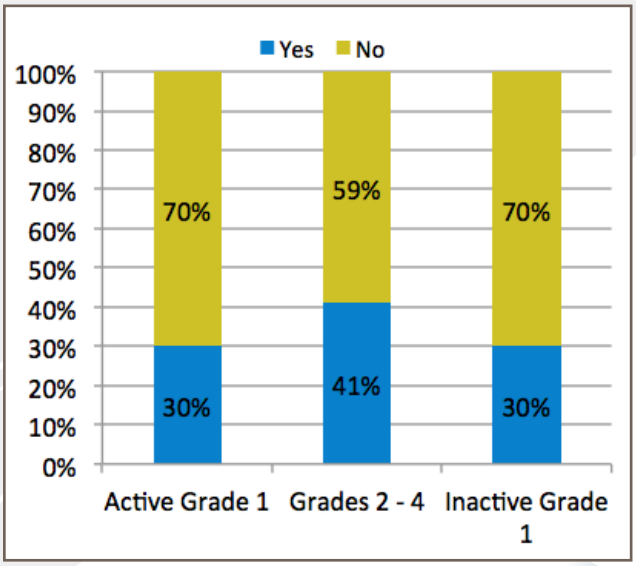
Fig. 9: Comparing contractor's highest educational qualification across all three groups

Most of the training and qualifications of the contractors are outside the fields of construction, with only 21% of the active Grade 1 contractors, 32% of the Grades 2 – 4 contractors and 17% of the inactive Grade 1 contractors having construction related qualifications. Similarly, 30%, 41% and 30% respectively have attended construction-related training which did not result in a formal qualification, for example, workshops and short courses. Most of these contractors attended construction management or supervision, trades (plumbing, carpentry etc.) or health and safety courses.

Very few (less than 1%) are currently in the process of getting such qualifications, and contractors are therefore not actively pursuing training in construction-related fields. This is important as we later identified that this is one of the areas they feel hinders their chances of success in the industry.



Contractors with formal construction qualifications



Contractors with construction-related training

Fig. 10: Construction-related training attended

There is little correlation between the level of education and whether the contractor was still in business, but there is more correlation between the contractor having construction-related training or qualifications and their staying in business. Of the companies no longer in business 41% of the owners did not have construction related training and qualifications, and the drop-out rate fell to 25% for the companies where owners had construction related training and qualifications. In other words, companies where owners do not have construction-related training are almost twice as likely to cease activities as those where the owners have construction-related training.

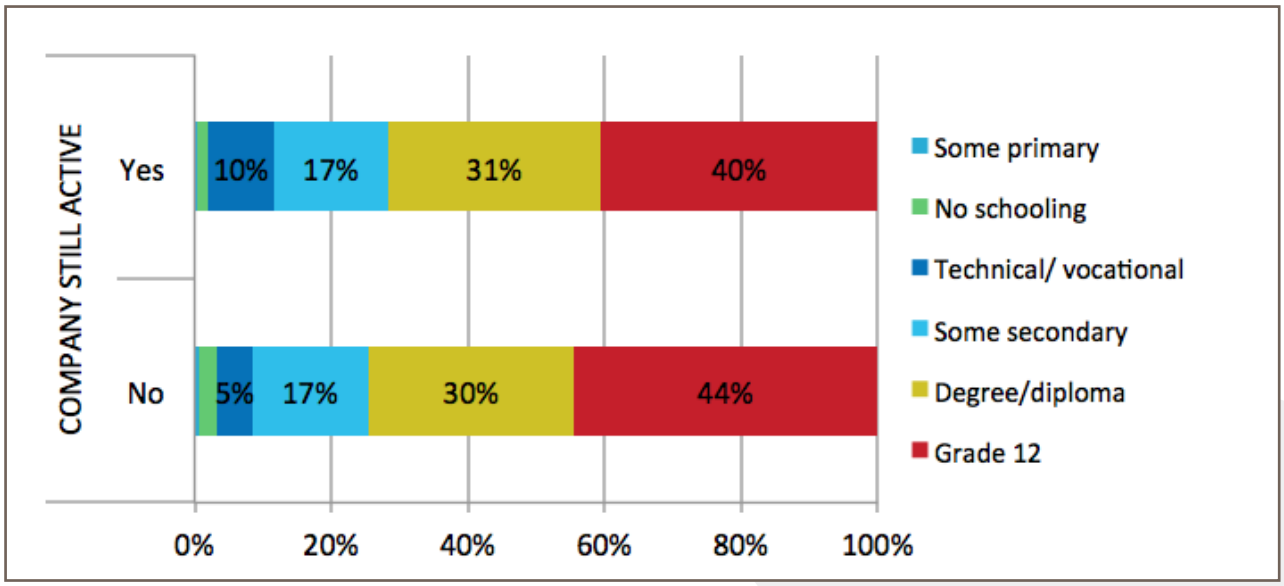


Fig. 11: Comparing level of education and if the contractor was still in business

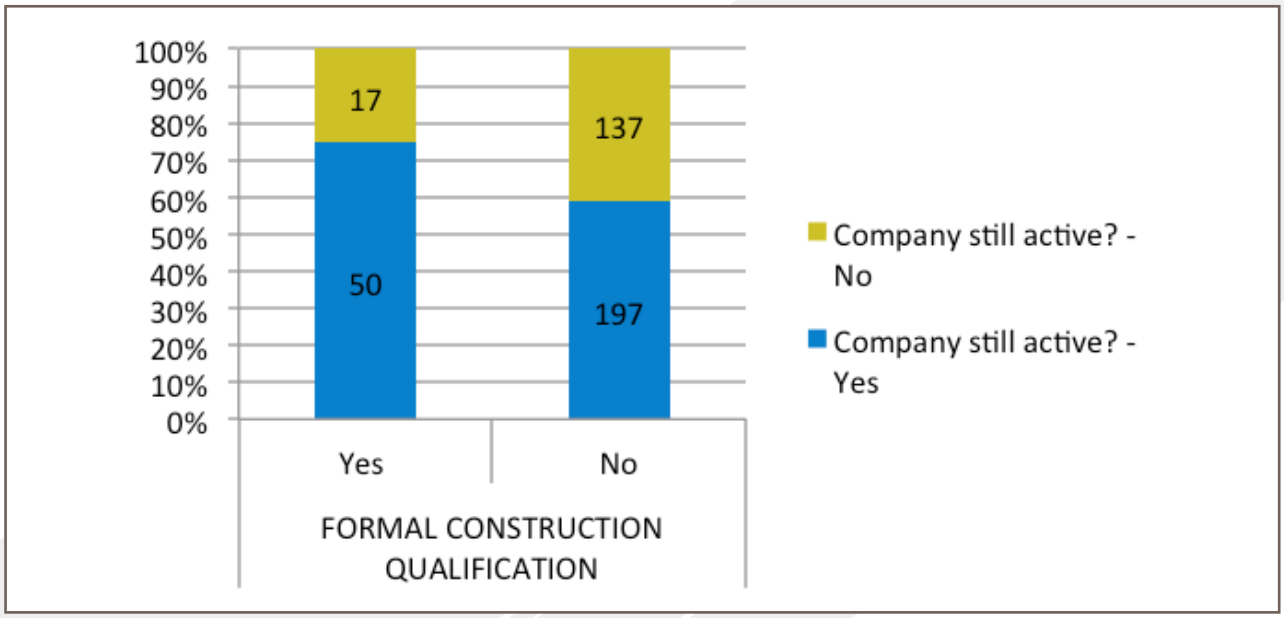


Fig. 12: Comparing construction qualification and if the contractor was still in business

There is great difference amongst research on whether the level of education of a business founder influences its chances of success. For example, Watson and Everett (1996) and Kalyani and Kumar (2011) found that while micro-businesses generally are prone to failure, the entrepreneurs' education, background, and experience all contributed to their chances of success especially when the operators are perceived to be lacking in the necessary business skills[12,13]. According to Katz and Gartner (1988), after entering the entrepreneurial world those with higher levels of education are more successful because their education:

- provides them with knowledge and modern managerial skills,
- makes them more conscious of the realities of business, and
- places them in a position to use their learning to manage the business[14].

Mueller (2006) concluded that work and previous self-employment experience is more important than education when predicting small business success, while Robinson and Sexton (1994) argued that though work experience impacted the probability of small business success, education was more important[15,16]. Rotefoss and Kolvereid (2005) proposed that a high level of education was only important in determining whether a person became an entrepreneur or not, as well as the types of businesses they start[17]. It is accepted that amongst entrepreneurs there is great diversity in the level and amount of education and training individuals have received, and that there is no significant difference in business performance arising from the founder's education levels[18].

Working experience

Most of the contractors had some work experience in the construction industry prior to setting up their own contracting company. Of the active Grade 1 contractors, 57% had previously worked in the industry with most having between 3 to 10 years' experience, sufficient to acquaint themselves with construction processes. For contractors in Grades 2 – 4, 64% had previously worked in a construction company, as had 60% of the inactive Grade 1 contractors.

[12] Watson, J. and Everett, J.E. (1996) Do small businesses have high failure rates?', Journal of Small Business Management, Vol. 34, pp. 45-62

[13] Kalyani B. and Kumar, D. (2011) Motivational factors, entrepreneurship and education: Study with reference to women in SMEs, Far East Journal of Psychology and Business, Vol. 3 No. 3 pp 14 - 35

[14] Katz, J. and Gartner, W. B. (1988) Properties of Emerging Organizations, Academy of Management Review, Vol. 13 No. 3, pp 429-441

[15] Mueller, P. (2006) Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? Small Business Economics, Vol. 27 No.1, pp 41-58

[16] Robinson, P. and Sexton, E. (1994) The effect of education and experience on self-employment success, Journal of Business Venturing, Vol. 9, 141–156

[17] Rotefoss B. and Kolvereid L. (2005) Aspiring, nascent and fledgling entrepreneurs: an investigation of the business start-up process, Entrepreneurship & Regional Development, Vol. 17, 109 – 127

[18] Matlay, H. (2004) Contemporary training initiatives in Britain: a small business perspective'', Education & Training, Vol. 11, pp. 504-13

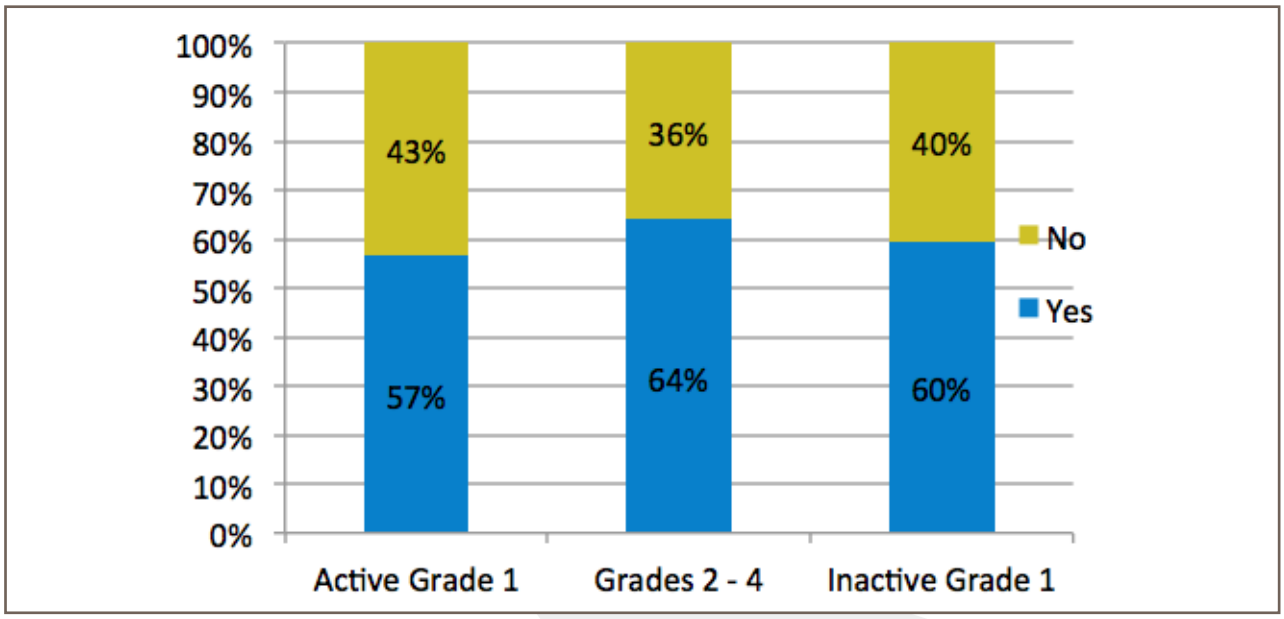


Fig. 13: Previous work experience in construction

There were a small number of owner/managers that had been employed in construction for over 20 years, but this was rare. The percentages of owners who had experience in the industry for the three groups of contractors are shown below.

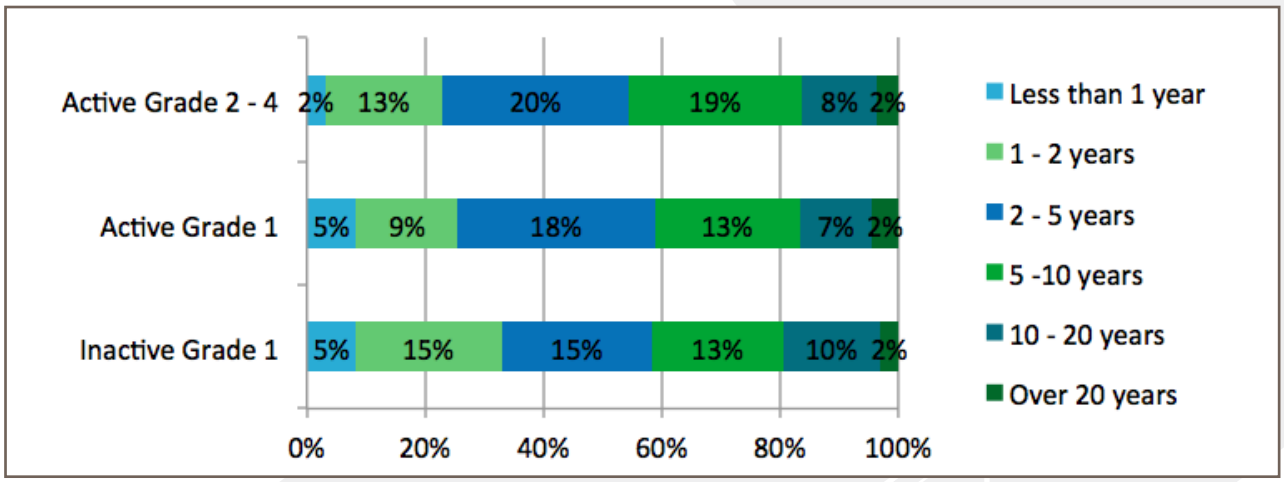


Fig. 14: Previous work experience in construction: years

Immediately prior to setting up their current construction business, 43% of the active Grade 1 contractors had been employed in a company outside the construction sector. Another 30% were employed in a construction company, 13% had been unemployed and 11% had been running another business outside the construction sector. 69% of them can therefore be thought of as having come from outside the industry (however from the previous section 57% have some work experience in the industry). Less than 1% had been running another business in the construction sector.

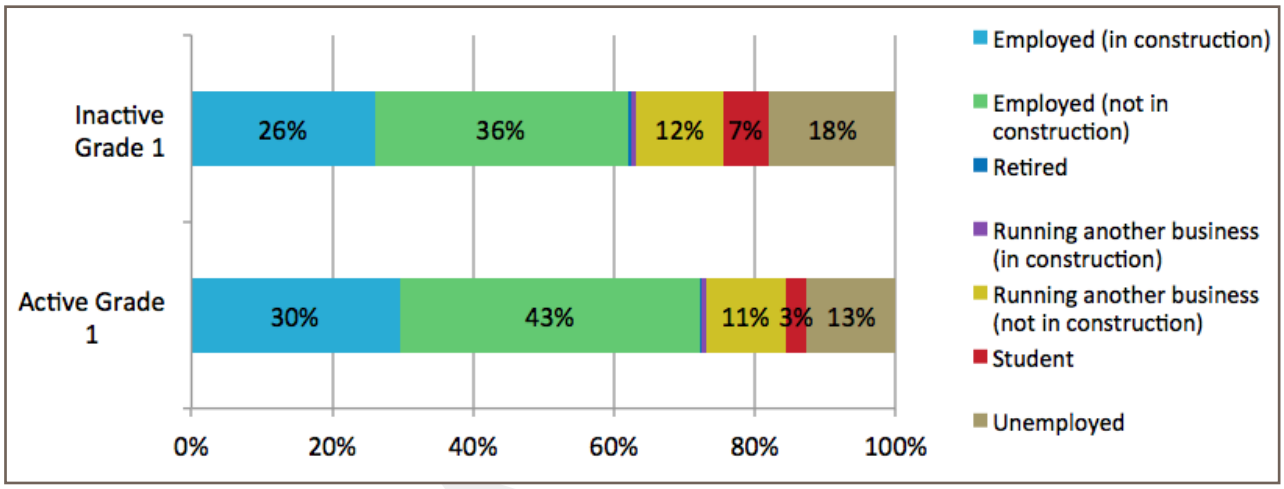


Fig. 15: Activity immediately prior to starting the construction business

These figures are similar for the inactive Grade 1 contractors, with 62% of the contractors previously employed before engaging in construction (26% in the sector and 36% in other sectors). Only 1% had previously been running another business (1% in construction) and previous business experience was thus lacking amongst many in this group.

As indicated previously, most researchers believe that experience is the best predictor of business success, especially when the new business is related to earlier business experiences. Entrepreneurs with experience in an industry are more capable of finding opportunities, have better developed business networks and have relevant knowledge of the business environment[19].

Many entry-level contractors start as employees in the industry and move to becoming informal or small contractors because of retrenchment. The high level of fragmentation in the construction industry reinforces the rate of informal or small contractor formation. Fragmentation occurs as a result of high levels of outsourcing and subcontracting by construction firms, in order to minimise the cost of production and address the challenge of high volatility of workloads in the industry[20,21].

Day-to-day management

In the majority of Grade 1 construction companies (85%), the owner /manager carries out the day-to-day management of work on construction sites. Those who were not in charge of the daily operations had appointed a supervisor/manager, or had a partner or another director responsible for this.

[19] Atherton, A., J. R. Faria, Z. Wu and D. Wu (2015) Human Capital, Entrepreneurial Entry and Survival, Discussion Papers in Economics No. 2015/1, Nottingham Trent University

[20] Milne, J. C. (1994), Guidelines for emerging contractor development, Development Bank of South Africa

[21] Gonzalez, M., Arrunada, B. and Fernandez, A. (1998) Regulation as a Cause of Firm Fragmentation: The Case of the Spanish Construction Industry, International Review of Law and Economics, Vol. 18, pp 433– 450

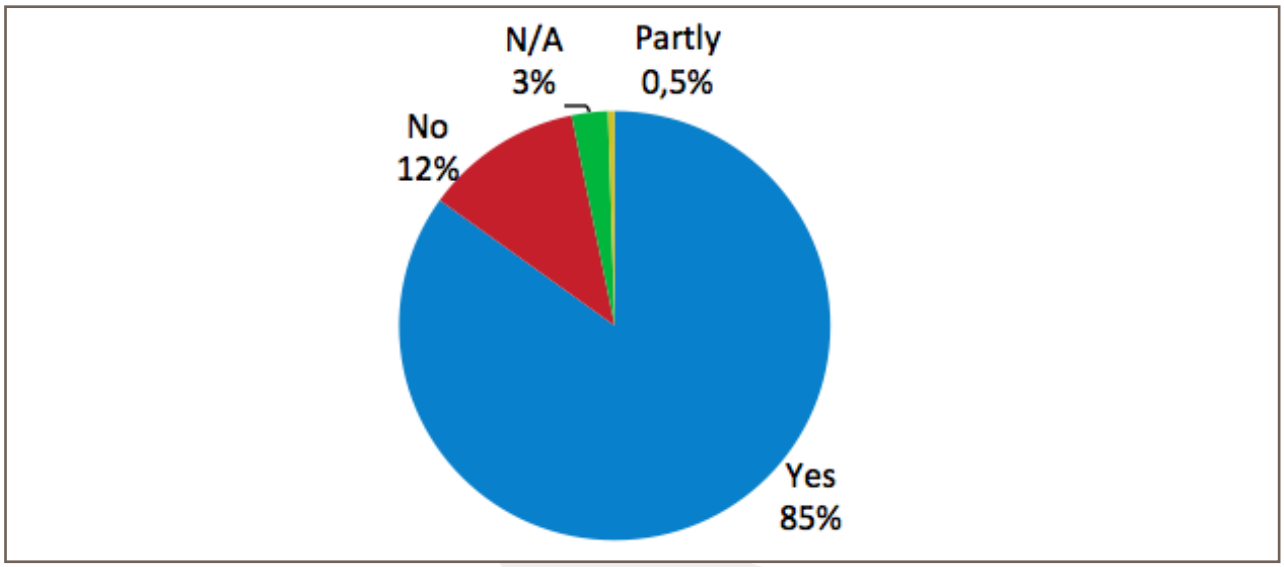


Fig 16: Does the owner /manager carry out day-to-day management

Time spent on the construction business

The construction business is the main source of income for 69% of the Grade 1 contractors and 83% of the Grade 2 - 4 contractors.

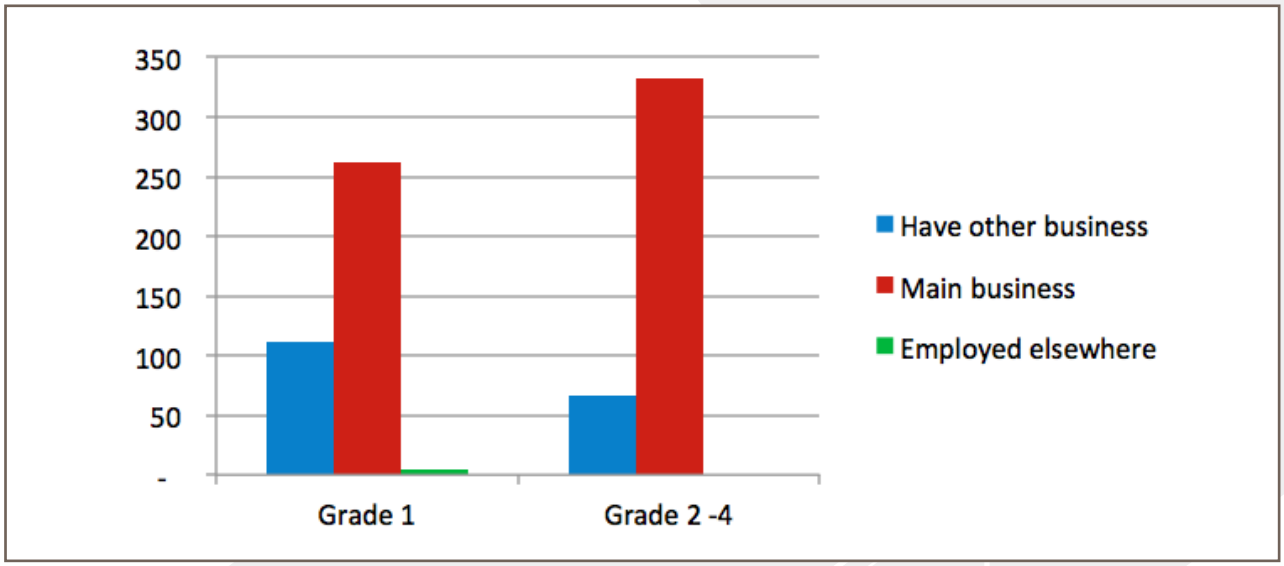


Fig. 17: Main activity of the owner

This is reflected in the percentage of time spent on the business. It is the main activity for over half of the active Grade 1 contractors who spend 80 – 100% of their time on it, while only 2% said they spent no time on the construction business. More of the Grade 2 – 4 contractors spend a lot of their time (80-100%) managing their construction business. The number of inactive Grade 1 contractors who indicated that they had spent a similar proportion of their time on their business (when they were active) is much lower (41%). This is intuitively correct; the more established contractors are

likely to be more successful in the industry and therefore spend more time on their business, and the inactive contractors are likely to have gone out of business as they had not spent as much time on their construction firm.

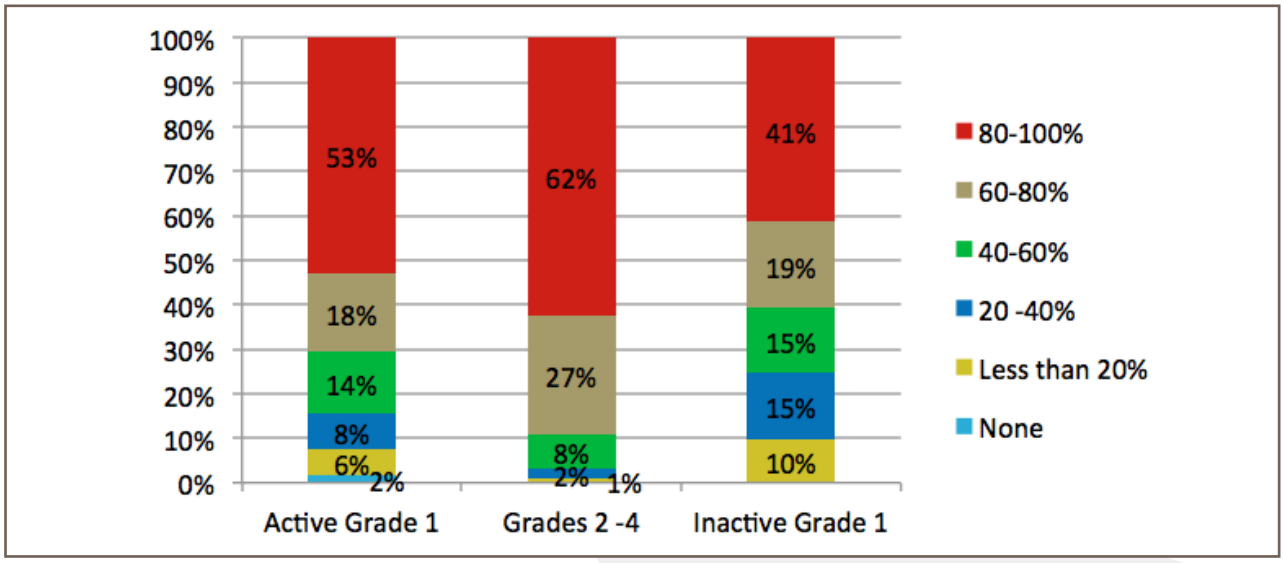


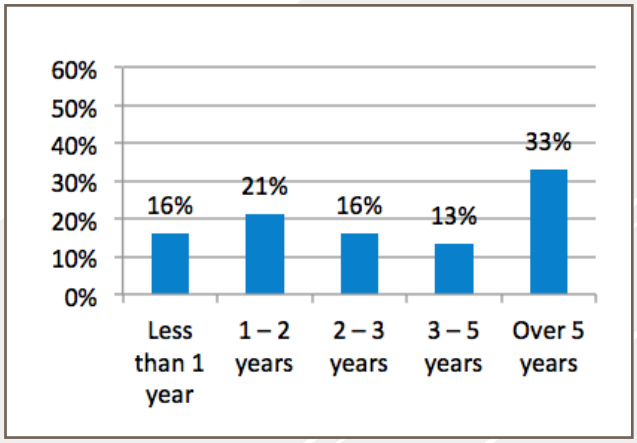
Fig. 18: Percentage of time spent in the construction business

As noted by several researchers, in entry-level firms there tends to be no divorce of ownership and control, and decision making is concentrated among one or two owner-managers. For the owners, the small business provides an important source of income and as the company grows this grows in significance.

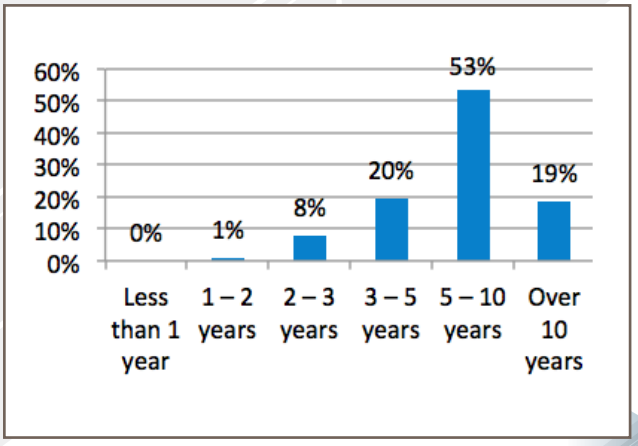
2.1.2. PROFILE OF THE COMPANY

Length of time the company has been in operation

A third of the active contractors have been in operation for over 5 years and are still in Grade 1, and almost half (46%) had been in operation for over 3 years. Sixty four (16%) had been in business for less than a year. Of the Grade 2 – 4 contractors 72% had been in business for over 5 years and 92% over 3 years. However, 1% of Grade 2 – 4 contractors had been in business for 1 to 2 years, 8% for 2 – 3 years, and 20% for 3 – 5 years.



Active Grade 1 contractors



Grade 2 - 4 contractors

Fig 19: Length of time in operation

According to cidb data, the average rate of upgrades per year varies between 5% and 8%; it is approximately 10% for Grades 2 to 4 but significantly lower for Grade 1 contractors, at around 3%[22] . A significant number of Grade 1 contractors therefore remained registered in Grade 1. The high numbers of contractors who enter into the industry, register in cidb in Grade 1 and stagnate there have been attributed by many researchers to the ease of entry into the industry[23].

Number of full-time employees

As expected, most (65%) of the Grade 1 contractor did not have permanent employees on a payroll, but 5% had over 10 employees, which is a surprisingly large number for what is expected to be predominantly entry-level contractors. The companies that had been in operation over five years were most likely to have larger numbers of employees on their payroll.

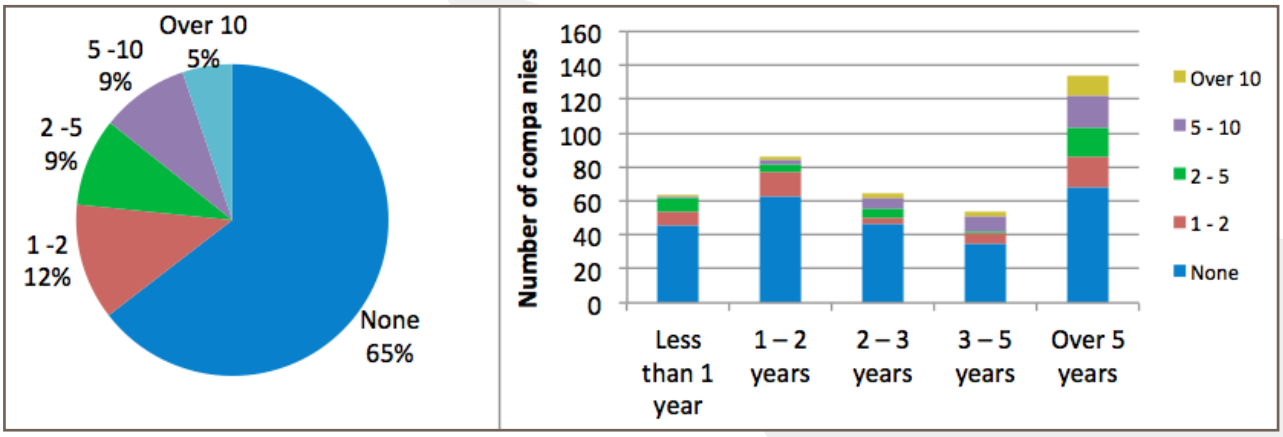


Fig 20: Number of full-time employees

Most of the employees of Grade 1 contractors do not have any formal training in construction, and of those who do the majority have technical or vocational qualifications (such as bricklaying, plumbing, carpentry & electrical training). Certificate holders mainly have occupational health and safety training, while almost all degree holders had civil engineering or construction/ project management education.

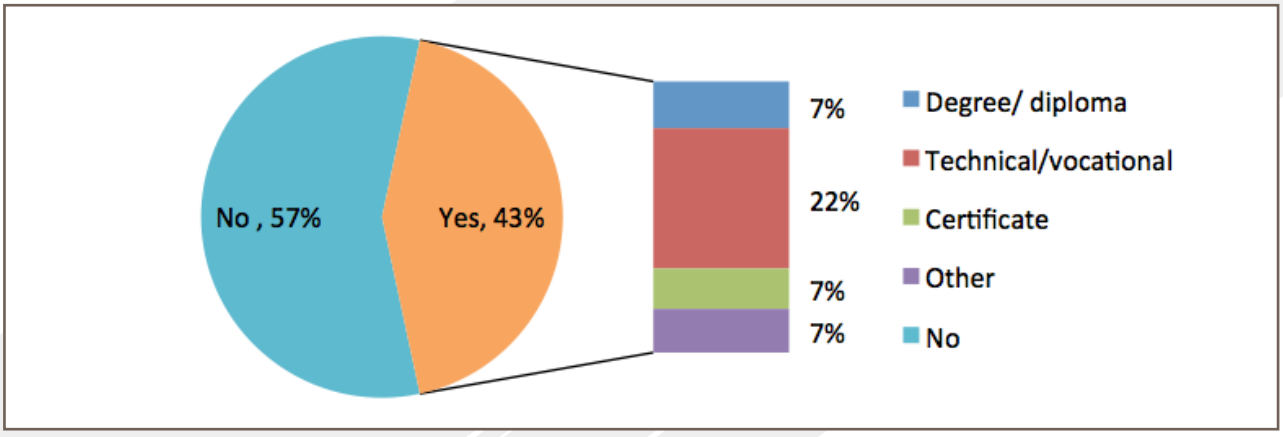


Fig 21: Contractors with formal training in construction

[22] cidb (2014) Quarterly Monitor, January 2014

[23] It is important to distinguish between 'entering the industry', which refers to formally establishing trading entity and commencing operations, and 'registering in cidb grade 1' which can be done by a contractor at any time after entering the industry. In this study we use 'entry' to refer to industry entry and 'registration' to refer to entry onto the cidb register, usually at Grade 1 level.

2.1.3. THE COMPANY'S PROJECTS

Construction projects executed in the last five years

A significant percentage (46%) of Grade 1 contractors had not carried out a construction project in the last five years, raising the question how they have survived that period.

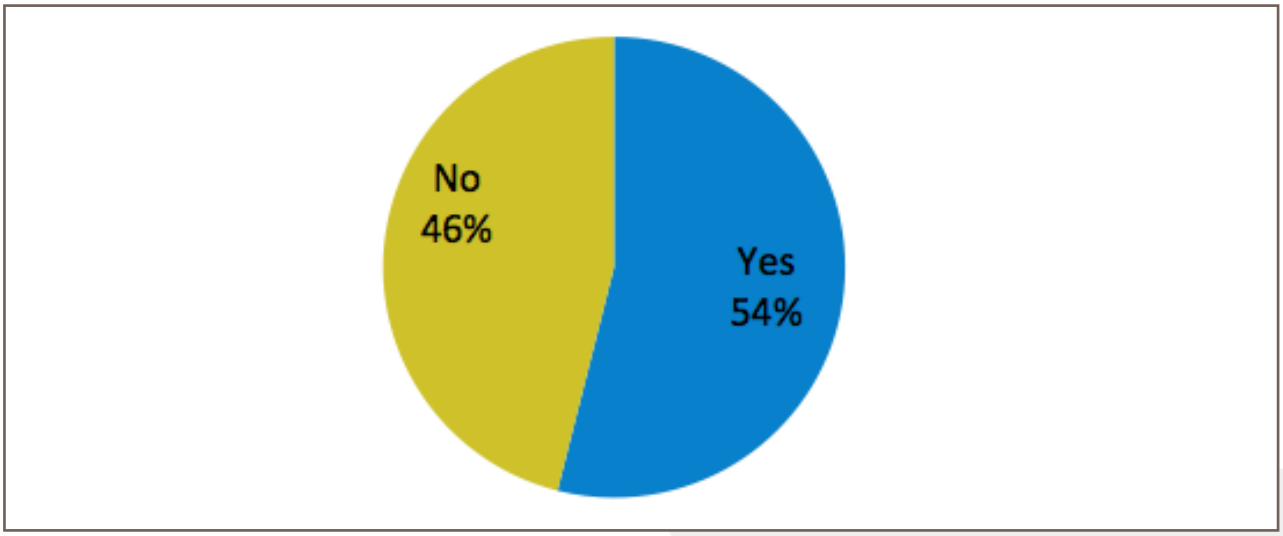


Fig. 22: Contractors executing projects in the last five years

As can be expected, the contractors who dedicated 80- 100% of their time to their business had a higher chance of winning work, with twice as many having carried out a project over the last five years. Contractors who dedicated less than 20% of their time to their business were five times as likely not to have carried out a project over the same period. For contractors who dedicated 20% - 80% of their time on the business, there was negligible impact on their likelihood of having carried out a project over the last five years.

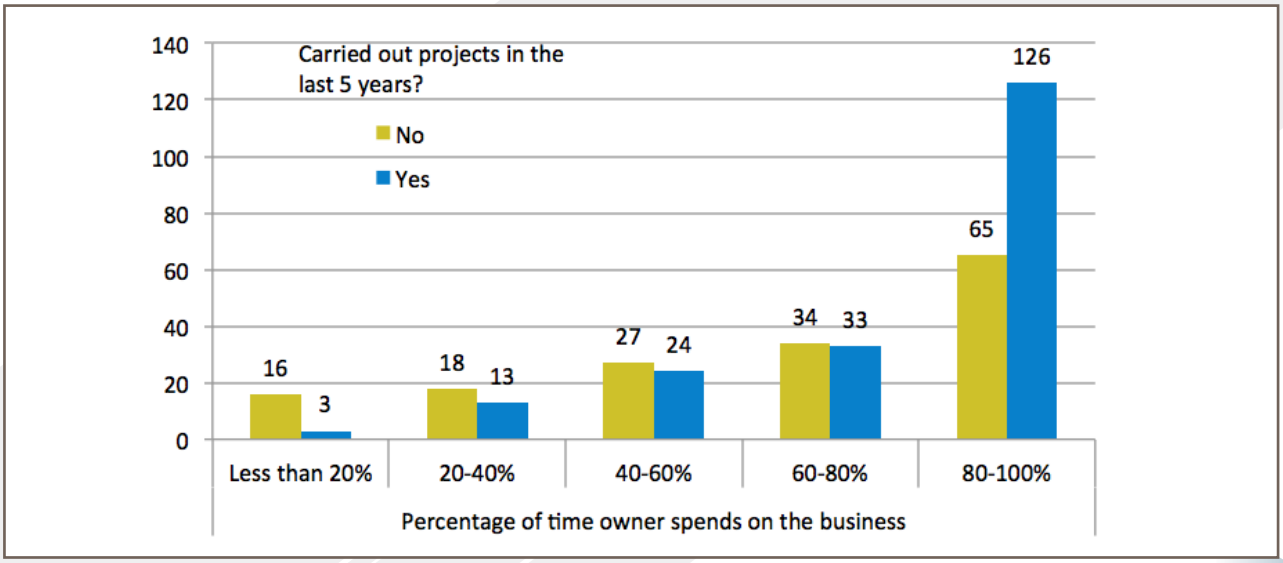
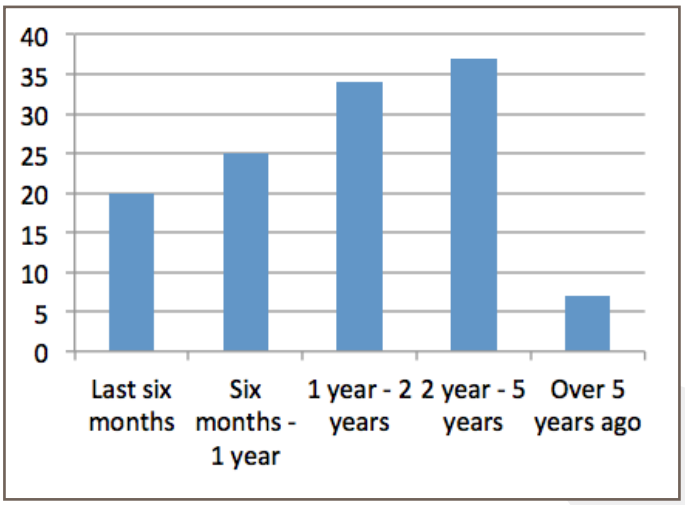


Fig. 23: Comparing owner's commitment to success in winning work

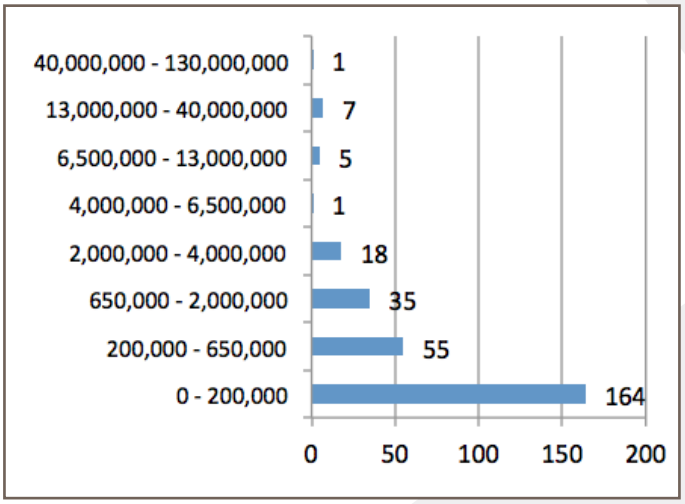
Project details

The contractors who had carried out a contract in the last five years provided further information on these projects, summarised below.



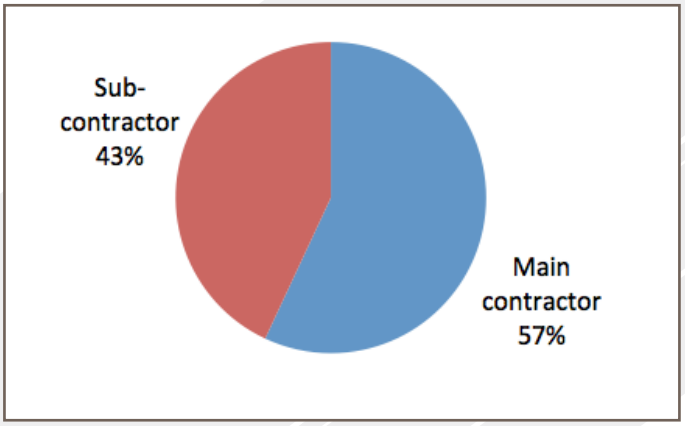
Most of the projects (63%) had been completed over a year ago, while 36% had been completed within the last year. A significant percentage of the contractors have thus been without work in the last year.

Fig. 24: When was their last project completed?



Using the cidb grades as a guideline, it is surprising that a number of the companies claim to have carried out projects that would place them in a much higher grade. One contractor reports having carried out a construction project within the 40-130 million range (cidb Grade 8). However, most carried out projects of less than R200,000 in value.

Fig. 25: Rand value of their last project



The contractors were the main contractor in 57% of the projects they had carried out, and in 43% of the projects they were sub-contractors.

Fig. 26: Contract status in their last project

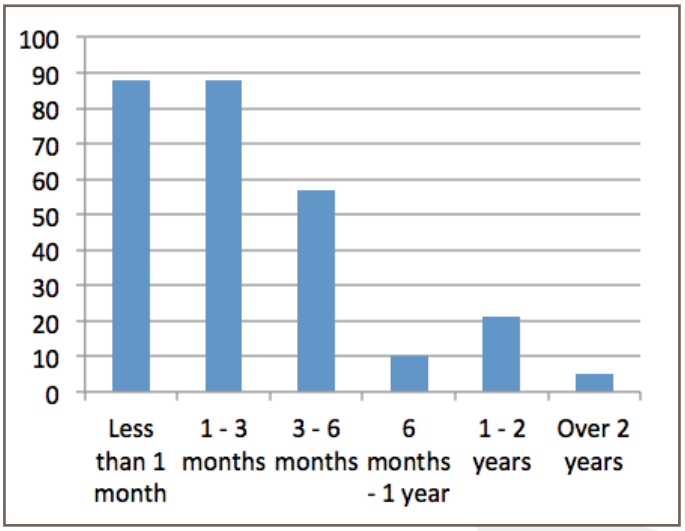


Fig. 27: Duration of the last contract

In line with the project values, most of the projects were also of short duration, 87% lasting less than six months.

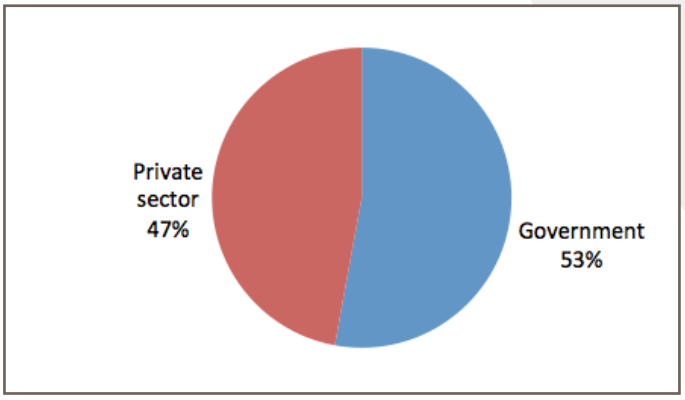


Fig. 28: Client for their last project

A slight majority of contracts was in the public sector. However, the proportion of contracts with the private sector is larger than expected, considering that these are believed to be entry-level contractors with little experience and contacts.

Research has shown that the general growth path that most firms appear to take is from:

(i) non-operational companies, to
(ii) companies carrying out occasional work in a specific sector, to
(iii) fully operational firms with continuous activity in the sector, to
(iv) companies fully registered as legal entities, to
(v) companies registered for VAT, to
(vi) companies with permanent employees

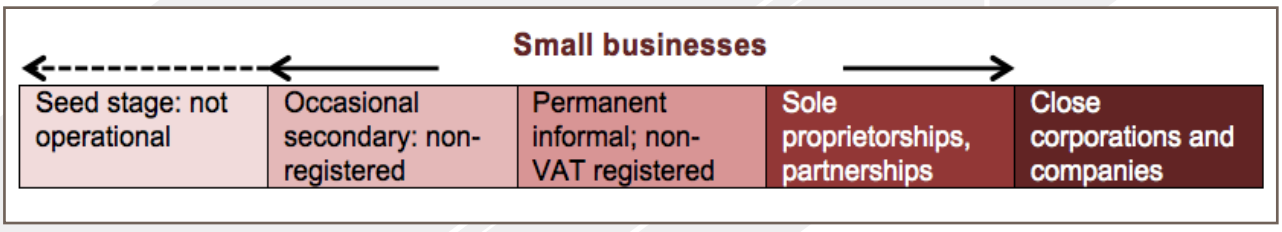


Fig. 29: Growth path of small firms in South Africa

Most of the Grade 1 firms fall within the second and third groups and are fully operational, but their construction activities range from continuous to very occasional. The reason for this is likely to be the high degree of competition within the sector.

The National Small Business Act divides enterprises into the following categories: survivalist firms, micro-enterprises, small firms, medium firms and large firms. In the construction industry, survivalist enterprises are predominantly informal, generate incomes often lower than the minimum, have little capital invested in them, involve virtually no skills training, have limited opportunities for growth into a viable business and are typically transient or labour-only sub-contractors (LOSCs). Table 4 summarises the characteristics of each set of contractors.

Table 4: Categories of construction firms and their characteristics

CATEGORIES
1) Survivalist firms a) Predominantly informal b) Generate lower than minimum incomes c) Little capital investment d) Little skills and training e) Limited opportunities for growth f) Transient or labour-only sub-contractors (LOSCs)
2) Micro-enterprises a) Owner-managed small businesses b) Few employees/family members c) Operate on the fringe of formality d) Lack: tax (VAT) registration, formal business premises or operating permits e) Lack formal accounting procedures f) Have limited capital bases g) Have basic technical or business skills h) Can make the transition to viable formal small businesses
3) Small firms a) Usually owner-managed b) Employ between 5 and 50 people c) Operate from formal business premises d) Meet formal registration requirements
4) Medium firms a) Usually owner-managed b) Employ up to 200 people c) Have capital assets of up to R 5 million
5) Large firms a) Employ 200 or more people b) Have capital assets of over R 5 million c) Have activities outside of South Africa

The Department of Small Business Development guidelines for the classification of small medium and micro-enterprises (SMMEs) in the construction industry uses the number of employees, annual turnover and value of assets to categorise these entities (Table 5).

Table 5: Classification of construction SMMEs

SIZE OR CLASS	TOTAL FULL-TIME EQUIVALENT OF PAID EMPLOYEES LESS THAN:	TOTAL ANNUAL TURNOVER (RM) LESS THAN:	TOTAL GROSS ASSET VALUE– FIXED PROPERTY EXCLUDED (RM) LESS THAN:
Medium	200	26.00	5.00
Small	50	6.00	1.00
Very small	20	3.00	0.50
Micro	5	0.20	0.10

Milne's (1994) model below also reflects the same classifications and transitions as the Small Business Act and the Department of Small Business Development.

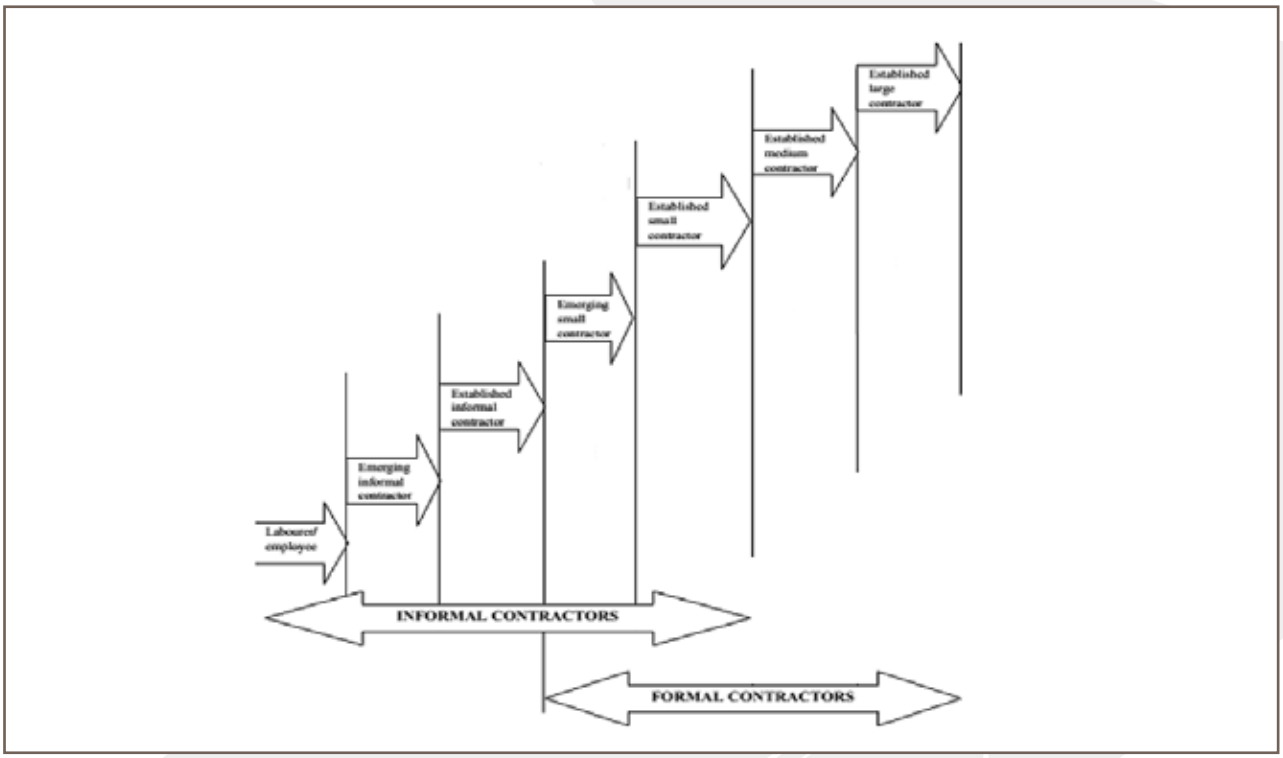


Fig. 30: Growth path of contractors
Adapted from Milne (1994)

The majority of micro-businesses are very small, with 72% having zero employees and 23% less than five employees, and only a minority of micro-businesses appear to generate substantial employment growth[24]. Owner-managers often work at both the management and operational level. Comparing with the results from our findings, the majority of contractors making cidb Grade 1 falls into the micro-enterprises group, with almost none in the survivalist group and a few progressive

[24] Storey, D.J. (1994) Understanding the Small Business Sector, Routledge, London

firms falling under the ‘Small firms’ category. Under Milne’s (1994) diagram in Fig. 30 above, they would fall under the ‘emerging small contractors’ and ‘established small contractors’ categories.

2.1.4. TENDERING

Preferred sector for tendering

The majority of contractors tender for projects in both the public and private sector (73% of Grade 1 and 53% of Grade 2 – 4 contractors), with only 9% and 7% respectively focusing exclusively on the private sector. The higher grades seem to specialise more, though, as a significant number (40%) chose to focus on the public sector.

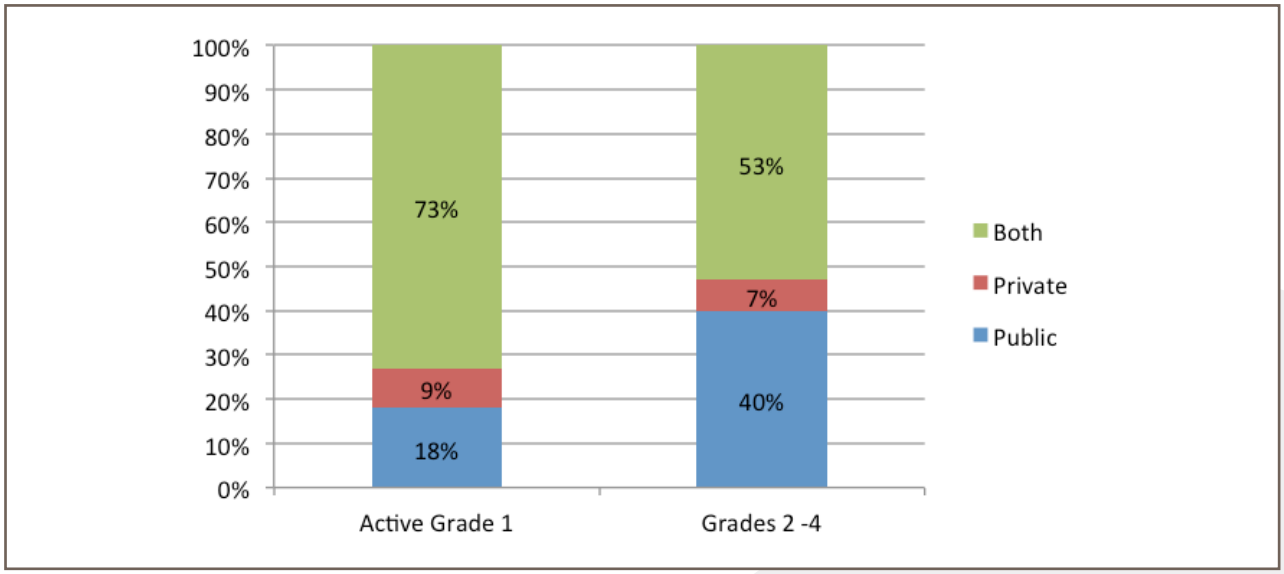


Fig. 31: Focus for tendering

Tenders submitted in the past three years

There is a distinct difference in the number of tenders submitted by contractors over the last three years. Grade 1 contractors submitted, on average, 15.5 tenders in that period, with the highest number quoted as an improbable “over 200”. 51 such contractors (18%) did not submit a tender in that period, indicating dormancy.

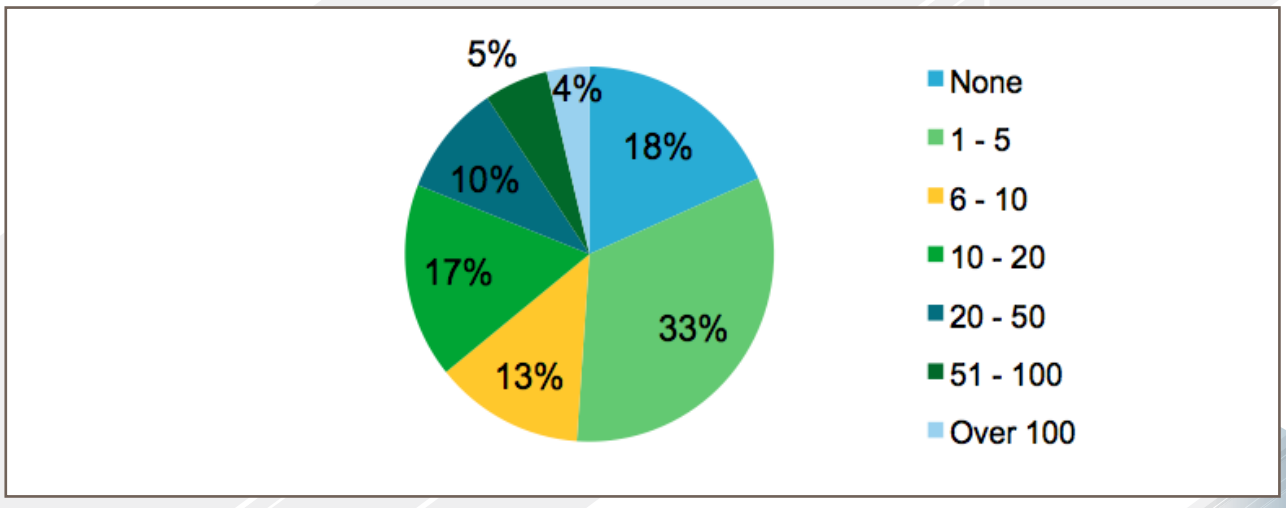


Fig. 32: Tenders submitted by active Grade 1 contractors

In contrast, Grade 2 – 4 contractors submitted an average of 37.9 tenders and none of them failed to submit a tender within that period. Although there is a wide variation in the number of tenders submitted by contractors, and the figures submitted by most are likely to be exaggerated, they still indicate that Grade 1 contractors tender less and are less successful.

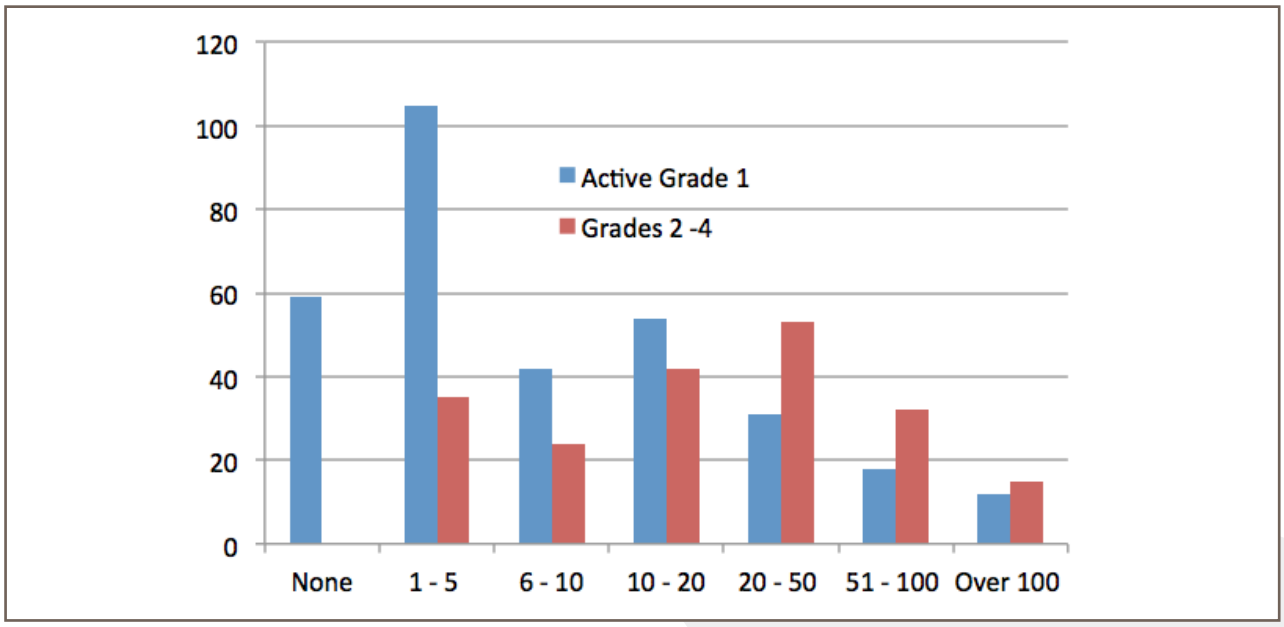


Fig. 33: Number of tenders submitted in the past three years

Main source of information on construction tenders

One of the most likely reasons that Grade 1 contractors tender for and win fewer construction contracts is a relative lack of knowledge about opportunities. However when asked what their main source of information on construction tenders was, there was little difference between active Grade 1 and Grade 2 - 4 contractors.

Newspaper advertisements/ request for tenders are the main source of information on possible opportunities for both sets of contractors. This is followed by the government gazette/tender bulletin and other tender bulletins such as provincial tender bulletins. None of the Grade 1 contractors mentioned pre-selection on tender databases, which further indicates they have not yet learnt to explore all avenues. Referrals and word of mouth account for only 8% of tendering opportunities for Grade 2 – 4 contractors, but are much more important for Grade 1 contractors (18%), another surprising finding. This could be because of the more informal nature of sourcing for opportunities.

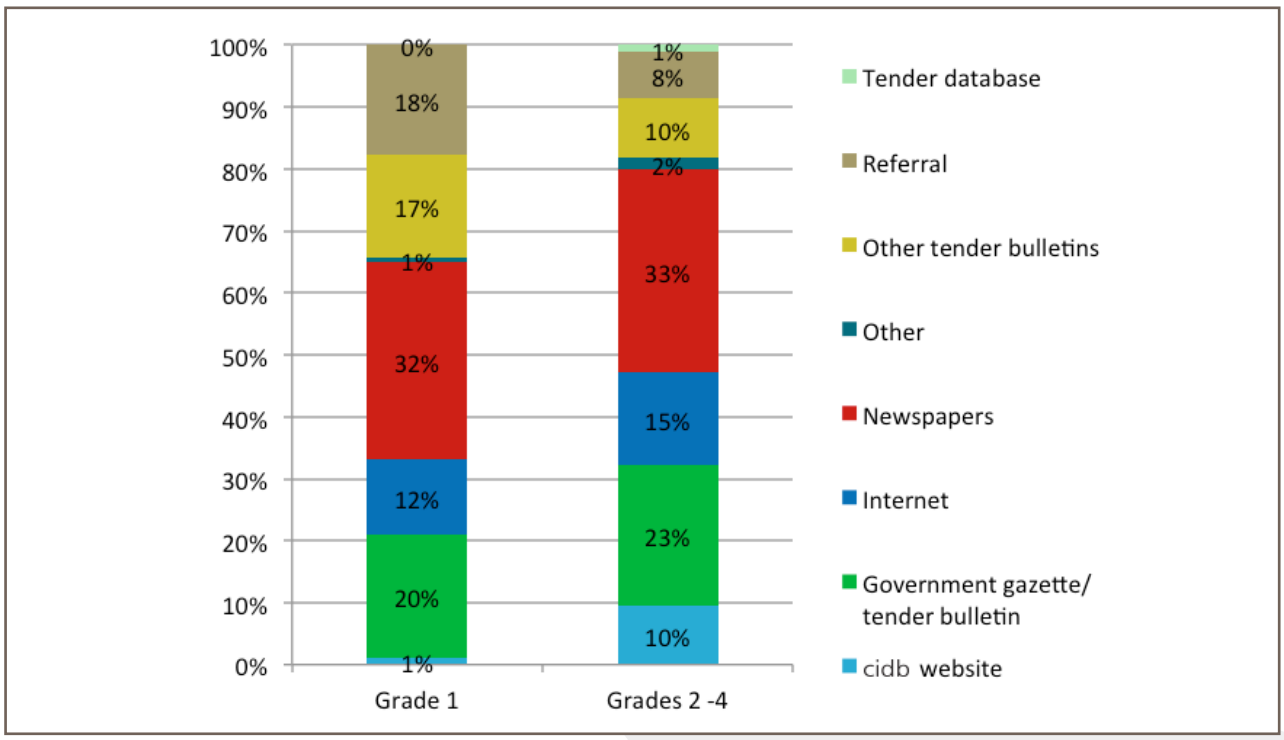


Fig. 34: Main source of tender information

Source of information

The literature review suggests that family and friends provide the most significant relationships for micro-business assistance, particularly during start-up, and are the main source of information during the start-up process[25]. A lack of knowledge on the availability of information or the perceived cost of information often prevents owner managers from accessing and using connections other than family and friends[26]. This is corroborated by the findings above, and suggests that if family and friends are the primary source of information for owner/managers then education and training should be made available to the wider community rather than just targeting individual owner/managers.

Reasons for success or failure in tendering

Compliance with tendering requirements (such as required bid documentation); pricing; and their experience in construction and/or perceived ability to do the work are the main reasons contractors attribute to winning their tenders. There is therefore little difference in the main reasons ascribed to tendering success. Interestingly, three Grade 1 contractors openly admitted they had been the beneficiaries of corrupt tendering practices.

The reasons ascribed to tendering success are similar irrespective of the sector within which the contractor prefers to tender, whether for the public, private or both sectors (Table 6), and whether the contractors were in cidb Grade 1 and Grade 2 – 4 (Fig. 35).

[25] Willers, M. (1991) Awaiting the Healer, Kingsway Publications, Eastbourne

[26] Still, L. and Soutar, G. (1996) Sources of assistance for small business: from start-up to operations, in Gibson, B., Newby, R. and Morris, R. (Eds), Business Relationships: Small Business Growth and Other Challenges, University of Newcastle, Newcastle

Table 6: Reasons for tendering success, by sector

SECTOR	REASONS FOR TENDERING SUCCESS
Public	Compliance with tender requirements
	Our pricing
	Ability to do the work
Private	Compliance with tender requirements
	Ability to do the work
	Potential
Both	Compliance with tender requirements
	Our pricing
	Ability to do the work

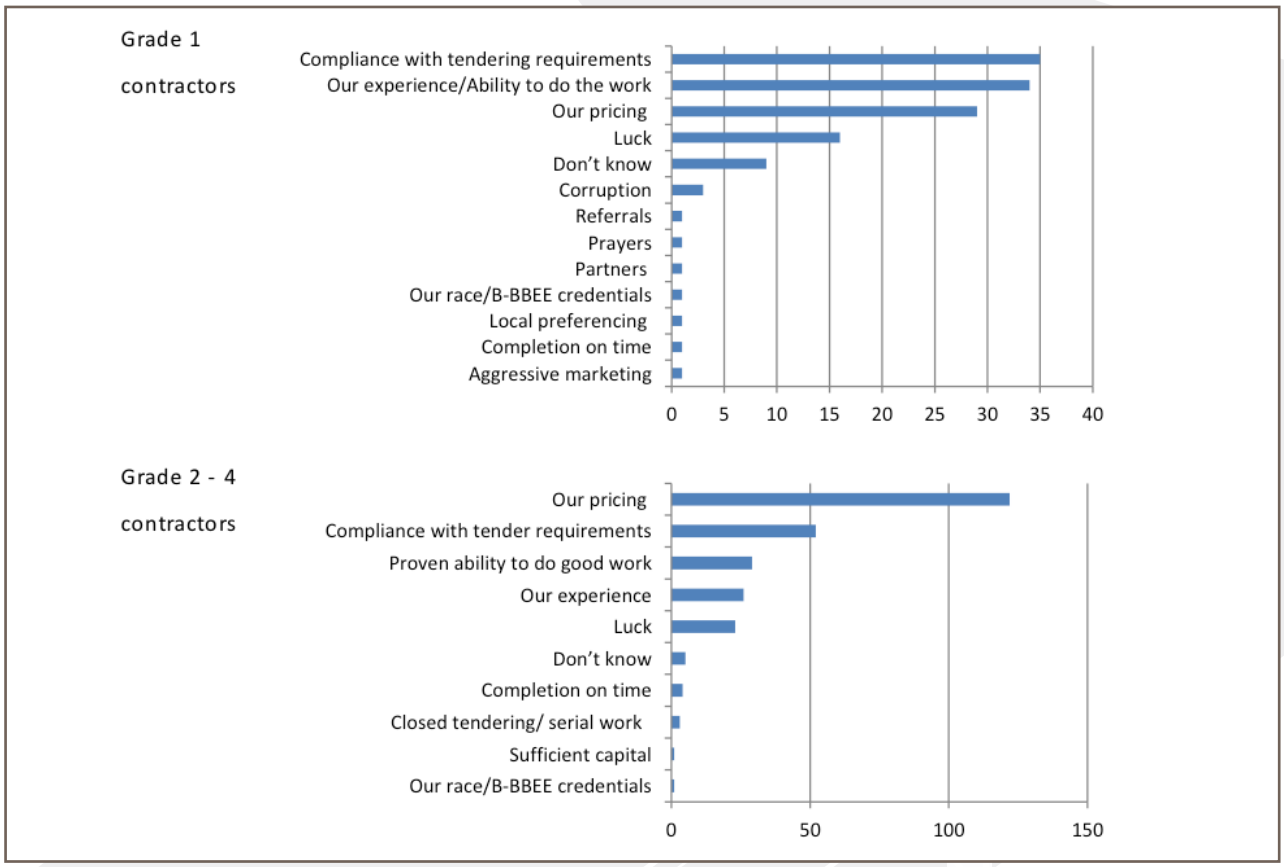


Fig. 35: Reasons for tendering success

Many of the contractors (41% of Grade 1 contractors and 40% of Grade 2 - 4 contractors) had no idea why they had not won bids submitted as in their opinion there was no feedback from the tendering process. Pricing was the second most quoted reason, with 20% of the contractors of the opinion that other tenderers had submitted more suitable prices, followed by 'Corruption' (13% of the

respondents). Other reasons cited by the Grade 1 contractors were 'Lack of influence/ connections' (7%) and 'Not enough qualifications or skills or experience' (6%). Grade 2 – 4 contractors preferred to believe that competition from other equally qualified companies (7%) and lack of sufficient qualifications or skills or experience (6%) was the reason they lost out.

In general, while both sets of contractors agree on the main reasons they lose out, Grade 1 contractors are more likely to blame external (to the company) factors and Grade 2 – 4 contractors' internal factors.

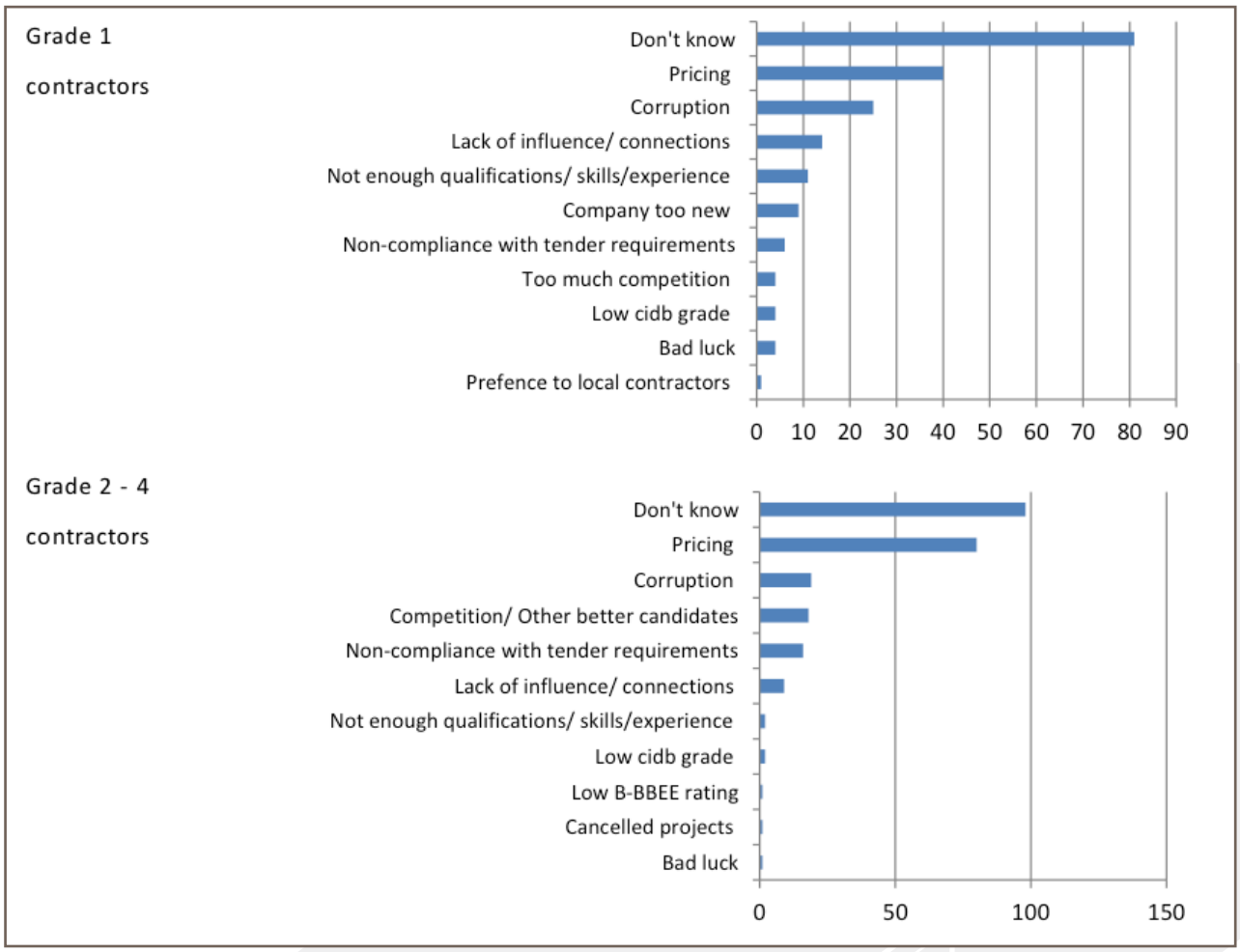


Fig. 36: Reasons for tendering failure

Funding for construction work

Own funds, from savings, other businesses; retained profits etc. are by a large margin the main source of contractor funds. Financial institutions provide finding to 7% of the respondents, but 5% say they have no source of funds for projects.

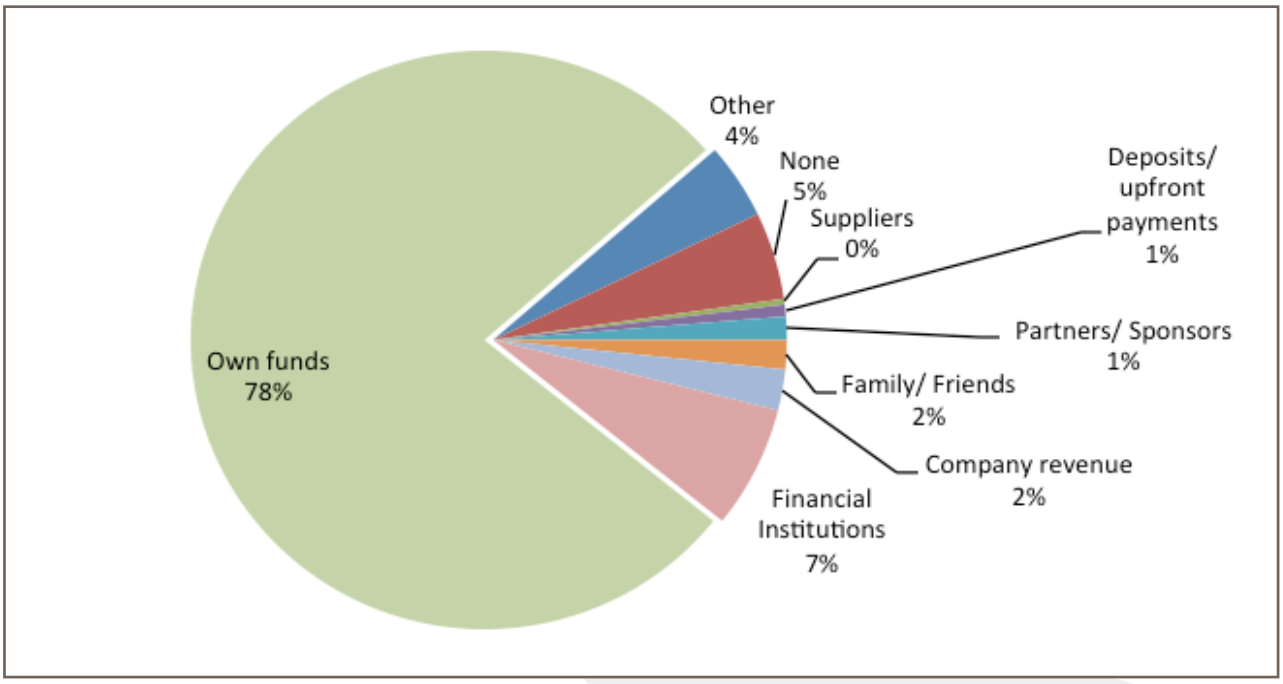


Fig. 37: Source of finances for construction work

2.1.5. MOTIVATION TO ENTER THE CONSTRUCTION INDUSTRY

Reasons for entering into the construction business

Kim, Min and Chaiy (2015)[27] found that there were two main sources of motivation that induce start-up firms to enter new markets. These were:

i. the expected economic profits from the target market if the net present value of the expected post-entry profits was greater than the sunk costs of entry (e.g., specialised capital equipment, government licences, etc.), and
ii. competitor-oriented entry decisions where the entry of direct competitor's into a new market is interpreted as signalling the existence of promising market benefits, prompting an firm to enter that market as well

They also found that the entry profit-motivation ranged along a continuum from immediate direct profits to indirect, long-term benefits, and most firms' entry motivations lies between these two extremes. On the competitor-oriented motivation, firms' market entry decision also ranged along a continuum from those firms whose entry decision was made on the basis of peer groups or potential competitors observed or anticipated entry into the market, and those that were guided solely by the firm's own business analysis and intentions. The target market profit-focused entry motivation and the competitor-focused entry motivation were independent of each other.

[27] Kim, N., Min, S. and Chaiy, S. (2015) Why Do Firms Enter a New Product Market? A Two-Dimensional Framework for Market Entry Motivation and Behavior, Journal of Product Innovation Management, Vol. 32, No. 2, pp 268 - 273

Studies specific to the construction industry show that the main motivation for individuals to enter into the sector are expected returns to entrepreneurship, especially in comparison to the returns they would receive from remaining in their current activity (typically some form of paid employment unemployment or business enterprise)[28]. This is influenced by the performance of the economy and especially the level of industry demand and activity in construction, and the current and expected future wage rates (and thus the opportunity cost) of the would-be entrepreneur[29]. Research from the UK construction industry shows that there is little correlation between incentives to start up business and the rate of new business formation[30]. Instead, the main motives for the establishment of construction businesses are:

- unavailability of other work;
- desire to provide additional income for the family;
- release/retrenchment from other work; and
- perception that the business provides good income[31].

The findings of this study indicate that the main motivators for market entry in the South Africa construction industry are:

i. Expected economic profits from the market
ii. Experience in, or preference (liking) for the industry.

The other cited motivations for industry entry are:

i. Need to empower others, and
ii. Competitor/peer-oriented entry leading to perception that the industry offers an rewarding livelihood

Financial reasons are by far the biggest motivation for entry into the industry, as 43% of the active Grade 1 contractors and 28% of the inactive Grade 1 contractors confirm. The industry is generally seen as a fast growing one with many opportunities to make money. In particular, those who were unemployed or retrenched were attracted to the industry because of the scarcity of jobs elsewhere and the ease of starting up in construction.
However the contractors who have been longer in the industry cited their aptitude or predilection for construction work as the main reason they started a firm. Unsurprisingly, contractors who enter into the industry because (i) they liked the work or because (ii) they have the skills or working experience are more likely to succeed than those who feel it offers good financial prospects.

[28] Evans, D. S. and Jovanovic, B.(1989) An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints, Journal of Political Economy, Vol. 97, No. 4, pp 808-27

[29] Robson M. T. (2011) The Determinants of New Firm Formation in UK Construction: Evidence from Quarterly VAT Registrations, International Journal of the Economics of Business, Vol. 1 No. 2, pp 233-246

[30] Robson M. T. (2011) The Determinants of New Firm Formation in UK Construction: Evidence from Quarterly VAT Registrations, International Journal of the Economics of Business, Vol. 1 No. 2, pp 233-246

[31] Mlinga, R. S. and Lema, N. M. (2001) Informal Contractors in Tanzania - their Characteristics and Reasons for Informality

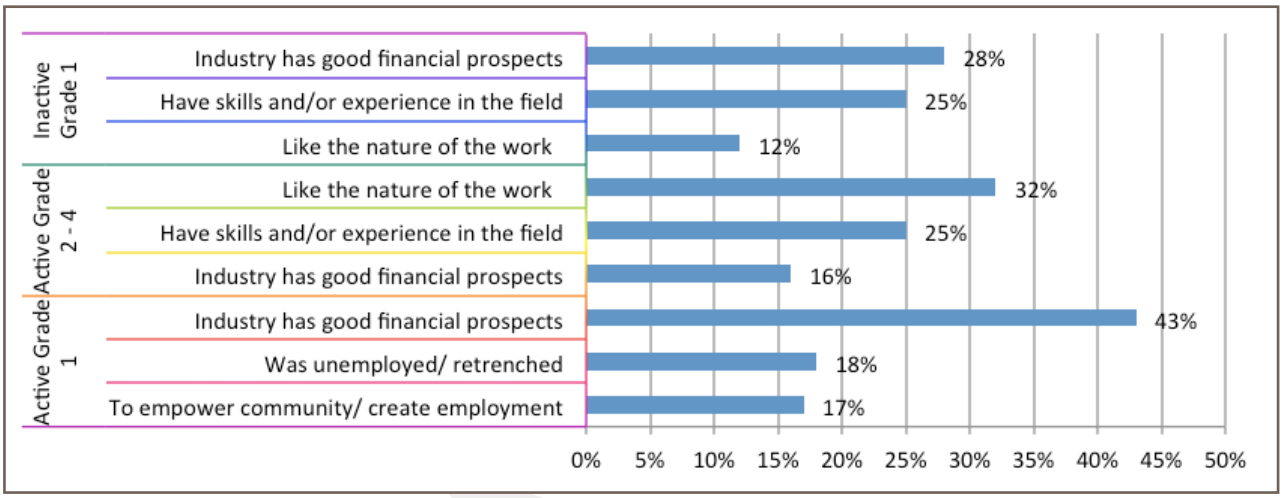


Fig. 38: Top three reasons for starting a construction company

The decision to establish a construction company is likely to be explained by personal factors, which have been increasingly identified as important to entry into the industry and to the growth prospects of a firm. These are usually categorised as push or pull factors where:

- Push factors refer to unemployment, redundancy, insecurity in an employment position, dissatisfaction with work in an organisation.
- Pull factors refer to the need for independence, flexibility, lifestyle, financial freedom, choice of self-employment, job satisfaction, personal accomplishment and fulfilment, desire to own their own company, the appeal of start-up culture and economic self-sufficiency[32, 33, 34].

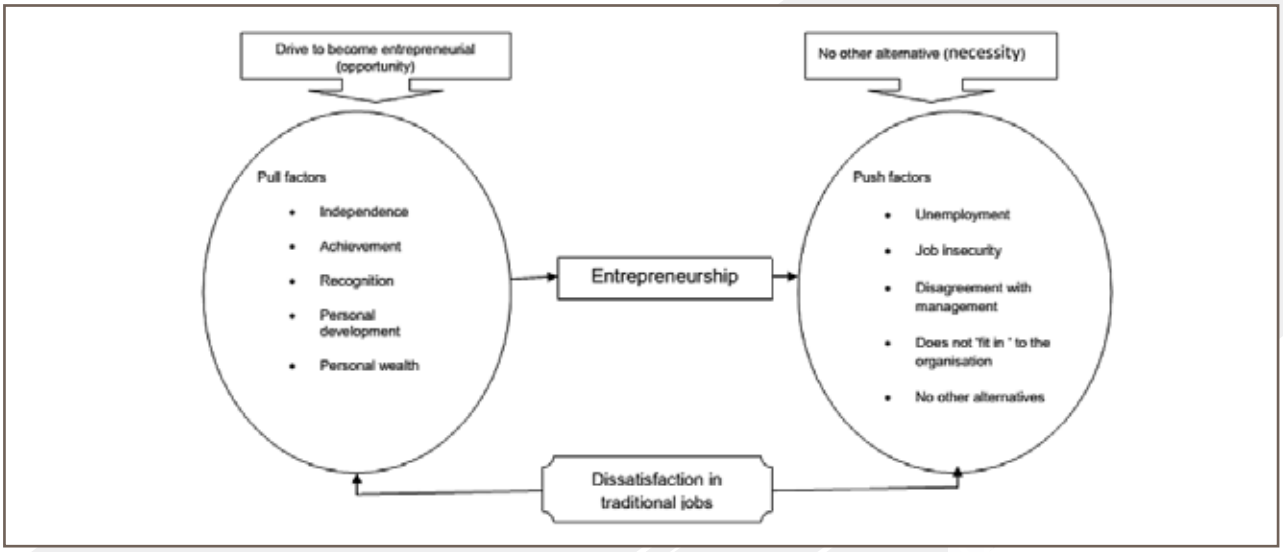


Fig. 39: Pull and push factors of entrepreneurship[35]

[32] Jalbert, S. E. (2000) Women Enterprise in the Economy, Centre for International Private Enterprise, Washington, DC

[33] Buttner, E. and Moore, D. (1997) Women's organizational exodus to entrepreneurship: Self-reported motivations and correlates with success, Journal of Small Business Management, Vol. 35 No. 1, pp 34-36

[34] Mallon, M. and Cohen, L. (2001) Time for a change? Women's accounts of the move from organizational careers to self-employment, British Academy of Management, 12(1): 217- 230.

[35] Mallon, M. and Cohen, L. (2001) Time for a change? Women's accounts of the move from organizational careers to self-employment, British Academy of Management, Vol. 12 No. 1, pp 217- 230.

Barriers to entry also impact on the ability of new entrants to enter and industry and earn positive economic profits. The construction industry is predominantly viewed as having low barriers to entry. These low barriers are mainly because:

- There are no dominant players which control the market. In industries with a few dominant firms that provide a major portion of total production, it is difficult for new firms to displace the dominant firms, which may possess other advantages over entrants such as lower costs and brand loyalty. This is not the case in construction;
- There are a wide range of government support incentives to emerging (black-owned) construction SMMEs, such as contractor development programmes;
- Entry to the building construction does not require large capital investments, as relatively few pieces of equipment have to be bought and small firms commonly lease equipment on an as-needed, project-by-project basis;
- It is possible to obtain building materials on credit or similar for each project; and
- The technical knowledge required in construction – which requires extensive practical experience - can easily be subcontracted although when cyclical demand is strong these skills are often scarce and expensive[36].

The above conditions appear to be true for South Africa, aided by the fact that within the local economic and legislative environment it is relatively easy to enter the SMME sector in construction. This however increases the intensity of competition and lowers returns to entrepreneurs[37].

The high level of entry into the construction industry by new participants is interesting because the industry is considered unattractive to investors. This is because of the:

- high number of competitors;
- similarity of offering, standardised through design in the traditional procurement system, meaning that the main focus of competition is price;
- high threat of new entrants as clients are not typically loyal, the lowest bid usually wins and there are low switching costs so on new projects new contractors are often used;
- high level of client bargaining power as there are few construction clients compared to the many service providers available to deliver projects;
- entry barriers are low and allow new rivals to gain a market foothold[38,39].

Key challenges faced in running the construction business

The key challenges faced by all the contractors are similar and revolve around:

(i) finance (accessing enough money to carry out projects, regular cashflows, being paid for work done) and

(ii) getting steady work especially given the high level of competition.

[36] Ball, M., Farshchi, M. and Grilli, M. (2000) Competition and the Persistence of Profits in the UK Construction Industry, Construction Management and Economics, Vol. 18 No. 7, pp 733-745

[37] CPLO (2014) Small Business in South Africa: What the Department of Small Business Development Can Do to Stimulate Growth, Occasional Paper 35, South Africa Catholic Bishops

[38] Yates, J. K., Mukherjee, S., & Njos, S. (1991)Anatomy of construction industry competition in the year 2000, Austin, TX: Construction Industry Institute

[39] Momaya, K., & Selby, K. (1998) International competitiveness of the Canadian construction industry: a comparison with Japan and the United States, Canadian Journal of Civil Engineering, 25, 640–652

Funding challenges are exacerbated by the frequent payment delays by clients leading to irregular cash flows, and the unpredictable nature of work in the industry which exacerbates the uncertainty of income.

These are compounded by lack of skills, lack of job experience, and difficulties complying with the administrative requirements involved in soliciting work. There are also widespread perceptions of corruption or irregular awarding of tenders.

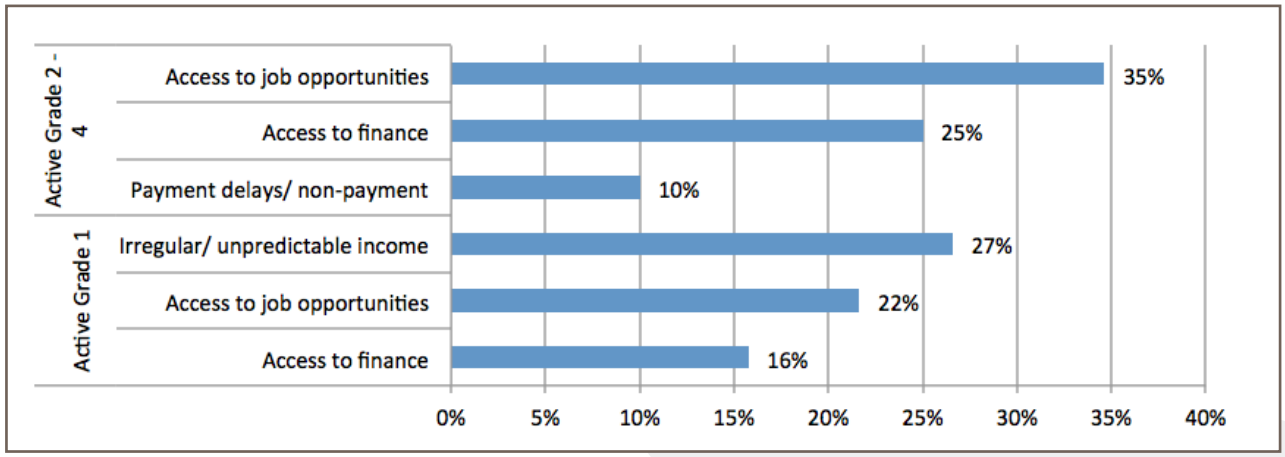


Fig. 40: Main challenges faced in the industry

These challenges are greatly intensified by the lack of experience and information, adequate preparation for self-employment about the industry, and a lack of mentors or networks. These result in a cycle that reinforces doubt and confidence in small contractors as shown in Fig. 41 below.

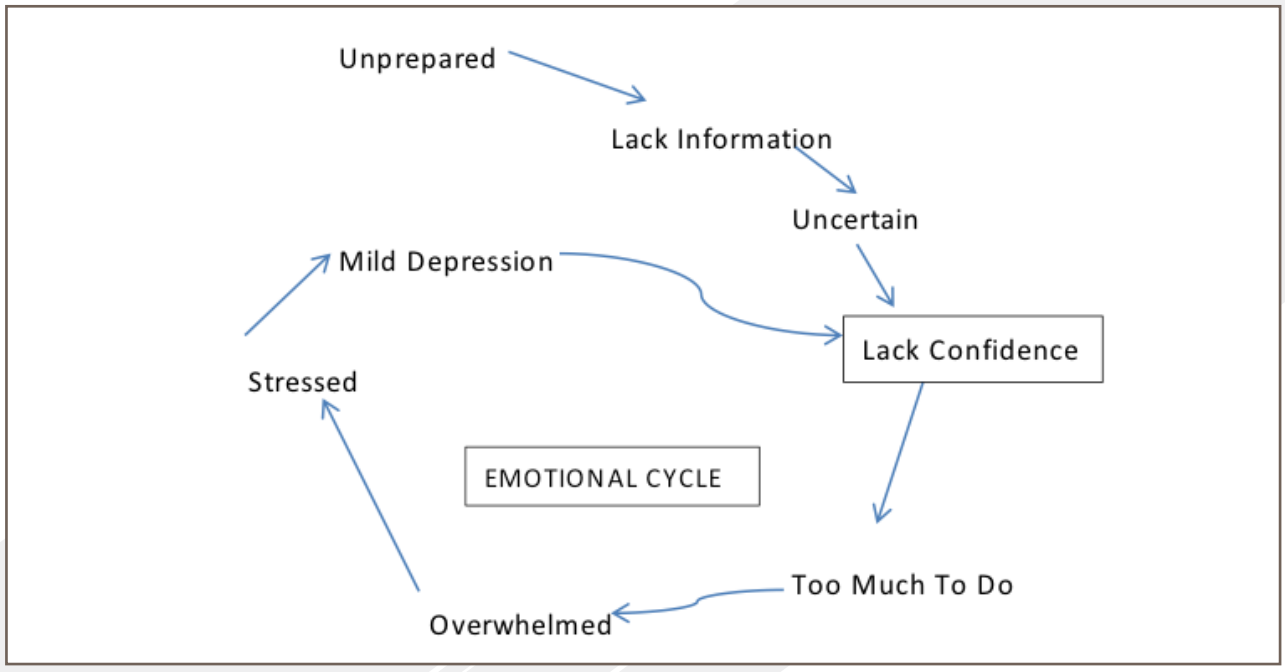


Fig. 41: The emotional cycle
Source: Samujh (2008)[40]

[40] Samujh, R. H. (2008) Government consults small business on business compliance costs: A New Zealand experience, Small Enterprise Research, Vol. 16 No. 2, pp 45-59

The cycle can become a downward spiral resulting in business and personal failure. An owner-manager without adequate preparation may have insufficient emotional resources to maintain a sustainable business idea regardless of its economic potential and viability. The availability of good support and advice then becomes important.

Reasons for success as a contractor

The more experienced Grade 2 – 4 contractors identified personal attributes (for example, being hands on and focused, having commitment and dedication, etc.) as the key reasons for their success as a contractor. This was followed by the quality of their work, and then by their expertise and experience in the industry. Other attributes considered important, such as pricing, marketing, and management skills are all rated much lower.

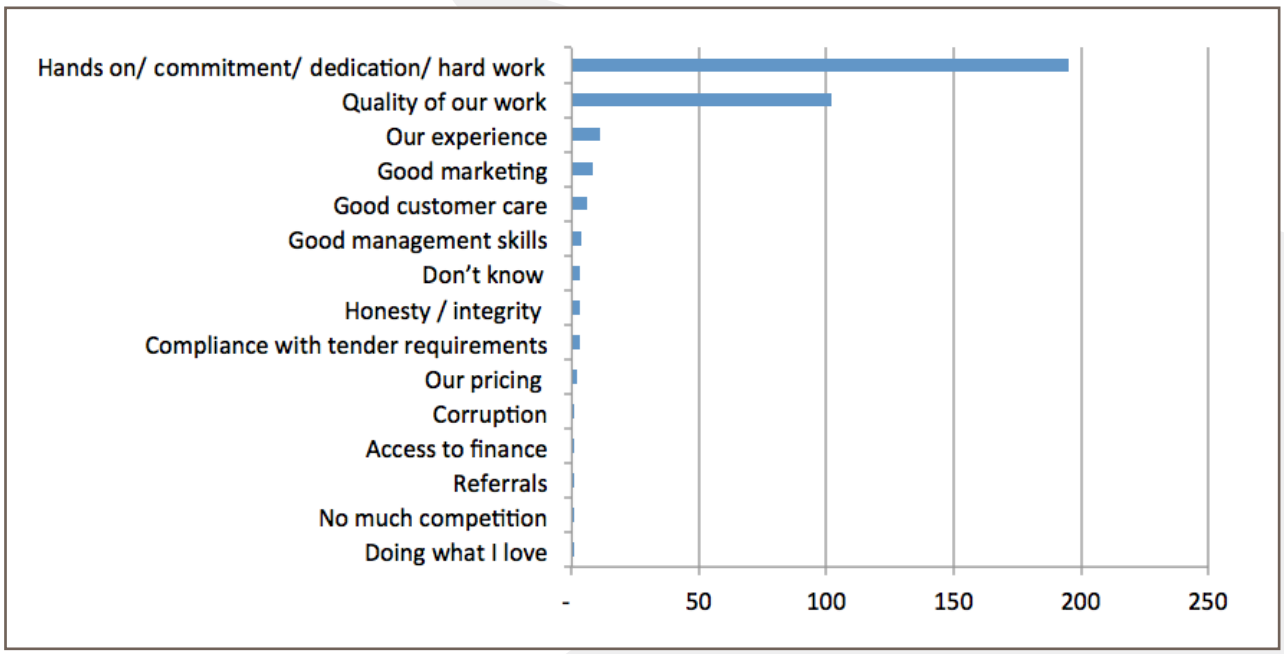


Fig. 42: Reasons for business success

However, when asked what a new company in the industry needed to have in order to be successful in construction they rated access to finance as the most important factor in ensuring success in construction, followed by the skills necessary to carry out work (management and construction skills) and to get work (marketing and knowledge of opportunities).

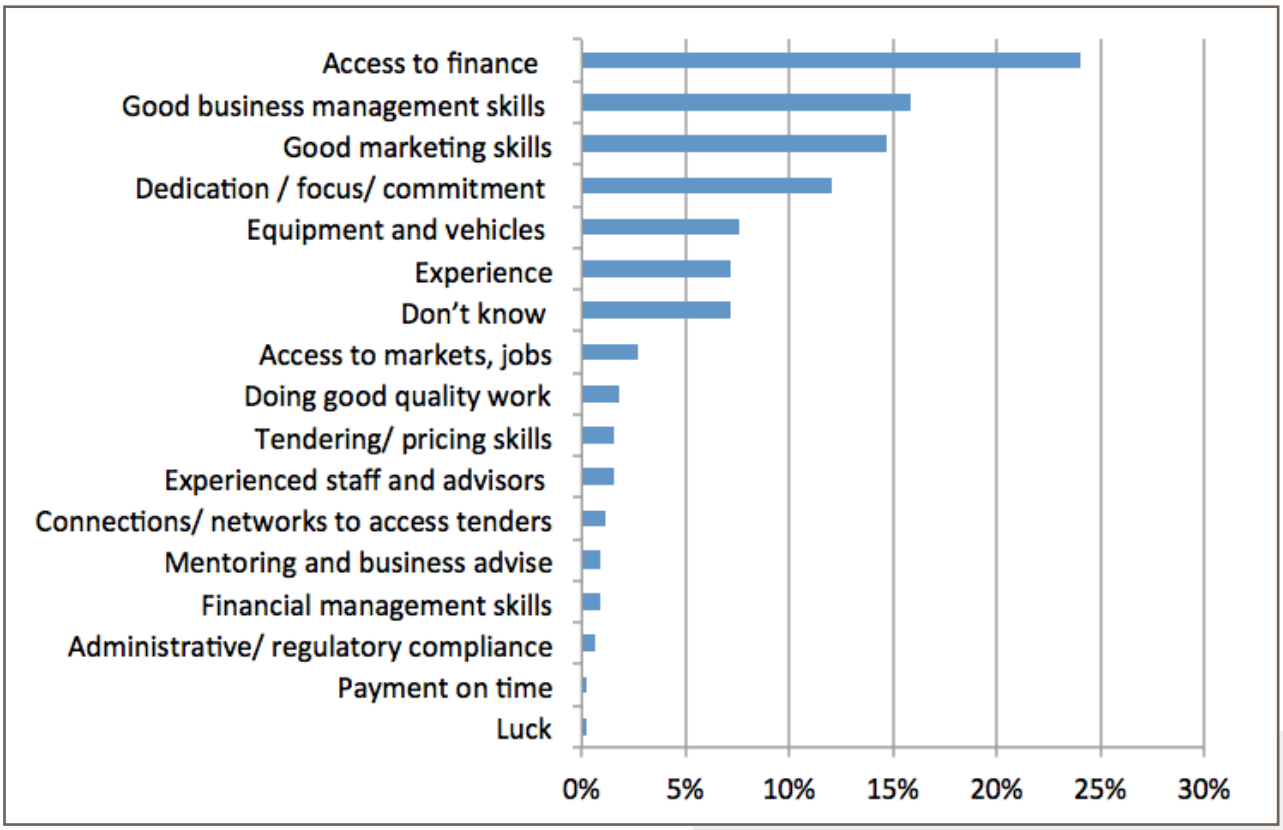


Fig. 43: What entrants need to succeed: Grade 2 - 4 contractors

Coming from contractors who have moved up from Grade 1, the above information is illuminating. The review of literature confirmed that it is more difficult to grow from a small to a large construction firm because:

- Large construction companies benefit from clear economies-of-scale, e.g. large scale construction material purchases usually attract discounts, so are harder to compete with;
- On larger projects, requirements to post construction bonds and other financial guarantees present obstacles;
- Track record, reputation and financial sustainability requirements on larger projects are also barriers to growth;
- High transportation costs favour large construction companies over smaller firms;
- Local advantages of location are often quite strong, relating to the sourcing of resources such as labour and materials in a local market; and
- Large projects often require high upfront investment or specific expertise, e.g., specialised engineering and technological skills, expensive machinery etc[41, 42].

[41] Ball, M., Farshchi, M. and Grilli, M. (2000) Competition and the Persistence of Profits in the UK Construction Industry, Construction Management and Economics, Vol. 18 No. 7, pp 733-745

[42] Hughes, W., Hillebrandt, P, Greenwood, D. and Kwawu, K. (2006) Procurement in the Construction Industry: The impact and cost of alternative market and supply processes, Taylor and Francis, London

Of these reasons, the ones pertaining to finance have been confirmed as particularly limiting to the growth of contractors. However, the results also confirm that the entrepreneurial capacity of the owner/manager is highly important to the ability of entry-level contractor to remain in operation and grow [43].

Grade 1 contractors who had been de-registered from the cidb also identified access to finance/ capital as the most cited critical requirement for entrants into the industry (22% of the respondents). Many (16%) also feel that new entrants need to be adequately prepared for the way the industry works and the key challenges contractors face (such as delayed payments or non-payment). Good business management skills and access to tenders through connections or networks are also important for 13% and 11% of the respondents respectively.

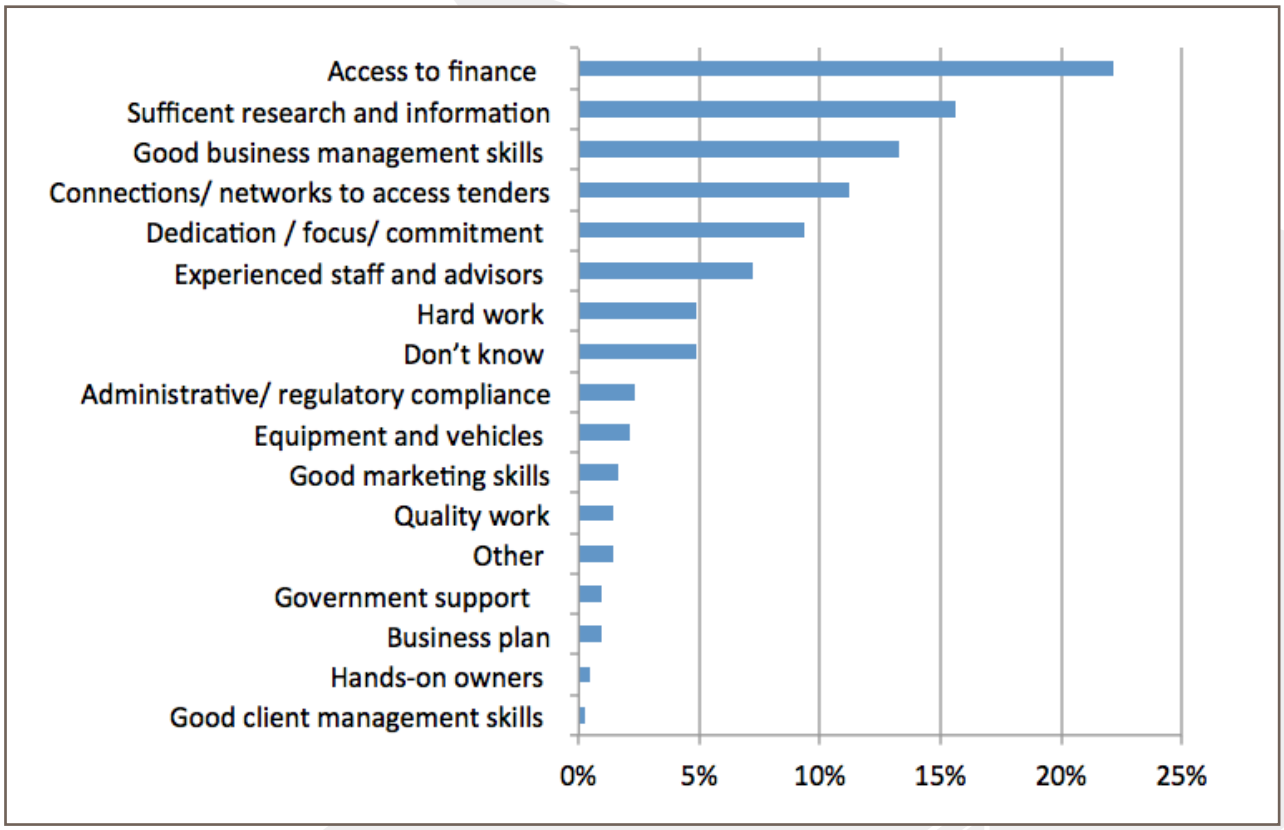


Fig. 44: What entrants need to succeed: Inactive Grade 1 contractors

Inactive Grade 1 contractors emphasise the need to know more about the industry, have networks and sources of tendering information, etc. much more than the more experienced contractors. The lack of information and knowledge about the industry is therefore a key driver in the success of entry-level contractors. This is evident in the contractors' responses when asked if they felt they knew enough about the construction industry before they started the contracting business. A sizeable percentage (35% of the active and 41% of the inactive contractors) felt they did not. However despite

[43] Annual Review of Small Business in South Africa – 2003

most of them not having worked in the industry before, the majority (62% and 57% respectively) feel they knew enough about the industry to succeed before they started construction. However this is unlikely to have been sufficient, as can be seen from the advice they provide to would-be entrants.

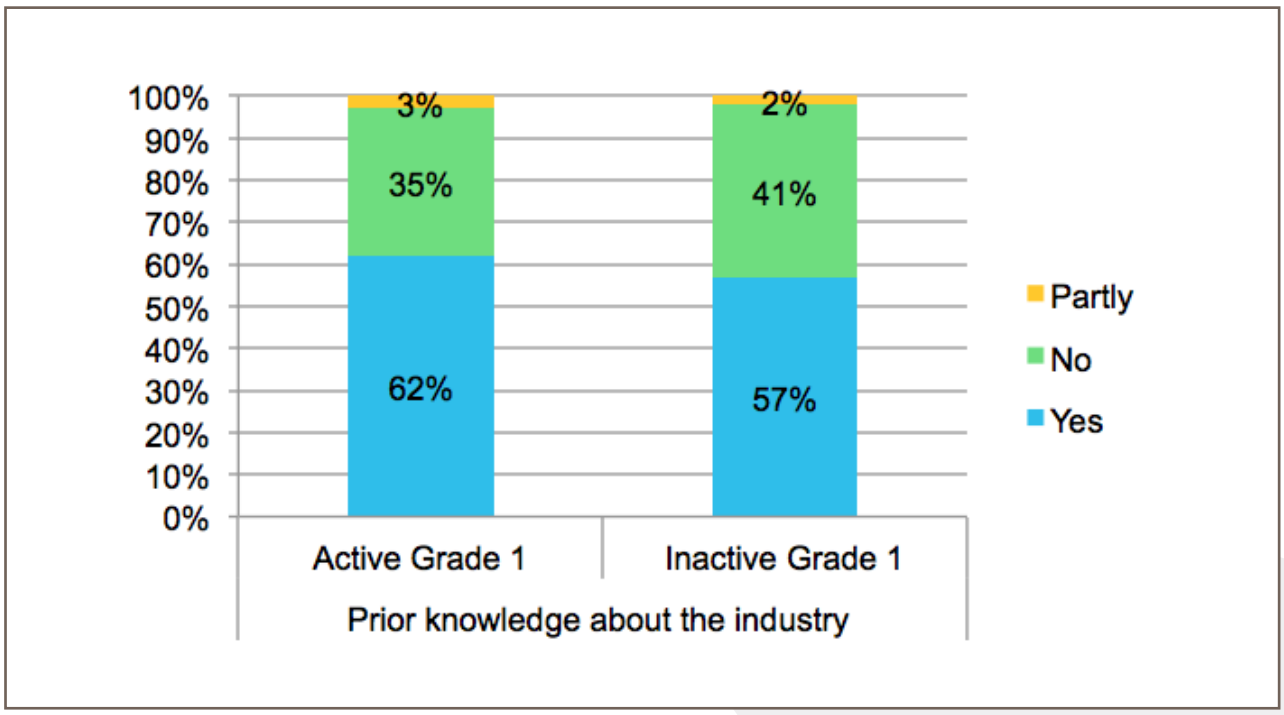


Fig. 45: Prior knowledge about the industry

Support needed to entry-level contractors

Grade 1 contractors identified the most important type of support they required as assistance in getting access to finance. This was also a key factor for Grade 2 - 4 and inactive Grade 1 contractors. This was followed by assistance in securing work and provision of appropriate training and skills in management and construction. The responses match the key challenges identified by the contractors. However a substantial percentage (14%) of Grade 1 contractors feel they need no help to succeed. For Grade 2 - 4 contractors, assistance in accessing work is surprisingly low on their list of preferred help, given that such contractors identify this as their most pressing problem.

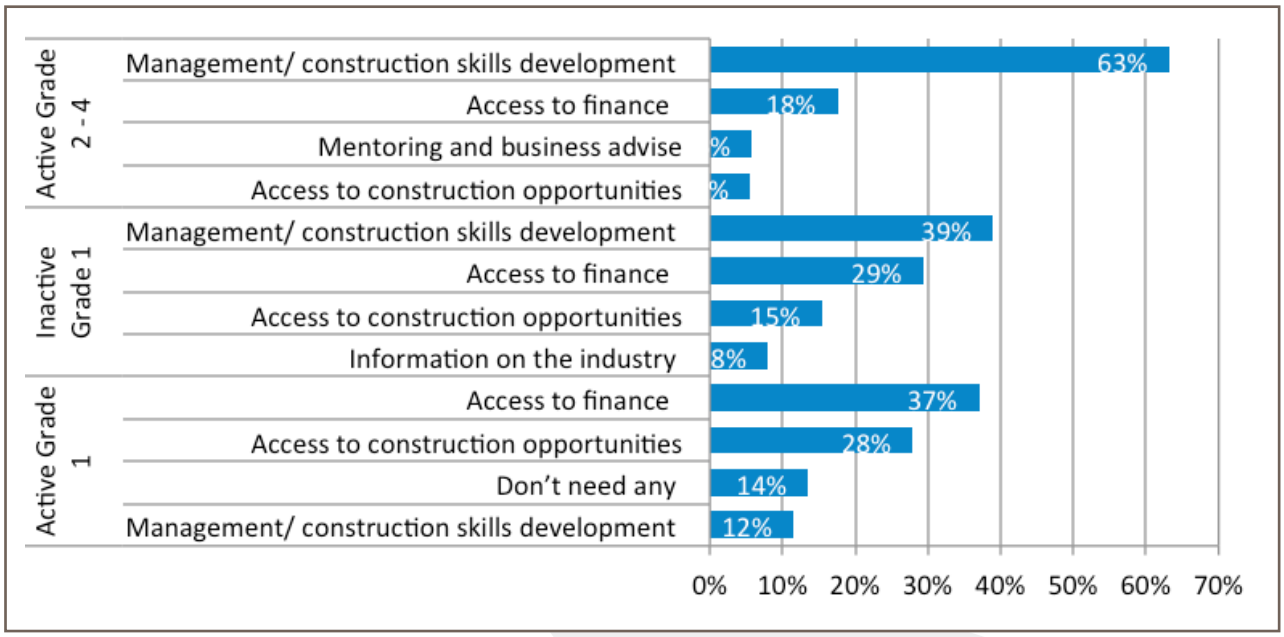


Fig. 46: Preferred support for industry entrants

Support received

The overwhelming majority of Grade 1 contractors claim to have received no help or support in starting up their company. Of the rest, personal support from immediate family and friends is the main source of support, followed by mentoring and advice from other contractors; and then support from government institutions (Gauteng Enterprise Propeller, National Youth Development Agency, the Department of Trade and Industry and Transnet were mentioned).

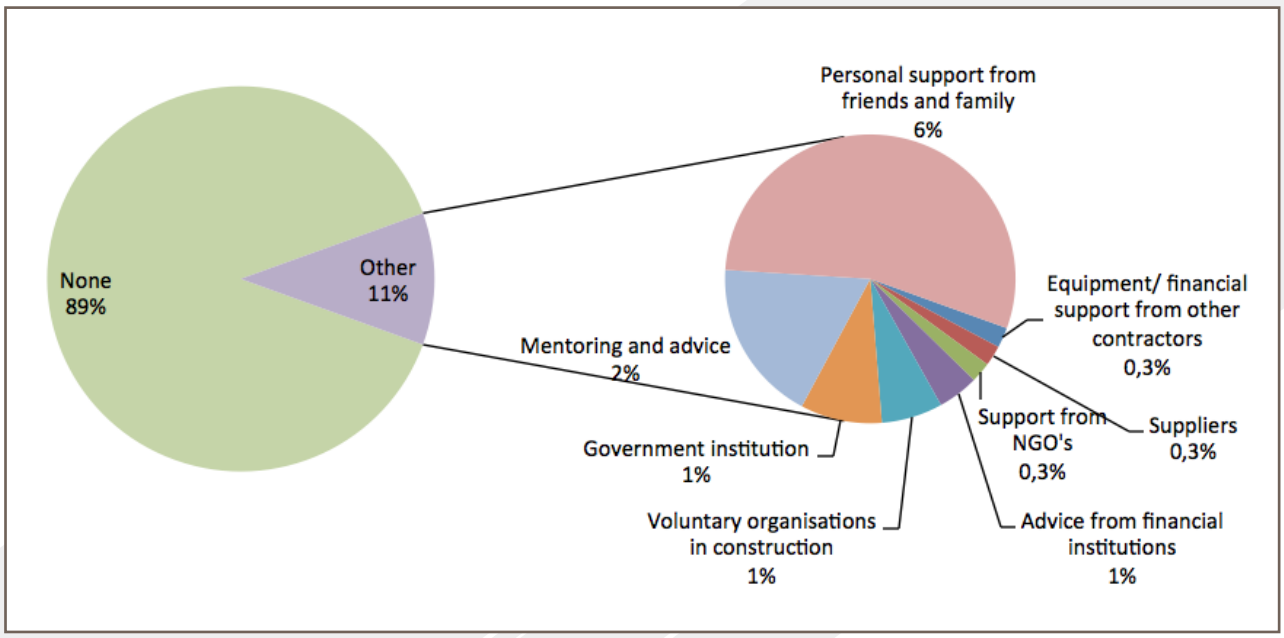


Fig. 47: Sources of business support, Grade 1 contractors

Similarly, the majority of Grade 2 - 4 contractors say they have received no help from any source to grow their business. For those who have, government institutions are the most likely source of support, followed by friends and family.

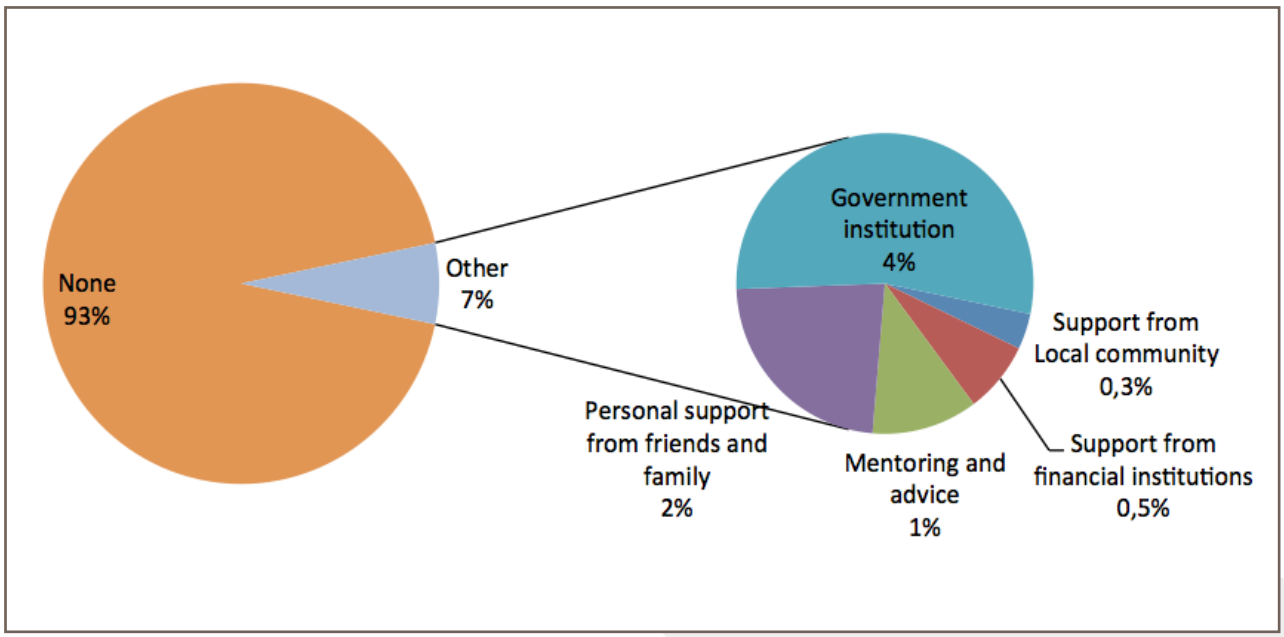


Fig. 48: Sources of business support, Grade 2 - 4 contractors

Advice to entry-level contractors

Most contractors advise industry entrants to have the personal attributes that they feel lead to success in the industry. These include patience, determination, focus and a refusal to be discouraged. The second most common recommendation to entry level contractors is to acquire construction or project management skills necessary to allow them to execute work successfully. This is followed by having a better understanding of the industry as gained through research, which is also seen as critical for entrants. 3% of the contractors advise others against entering the industry, however.

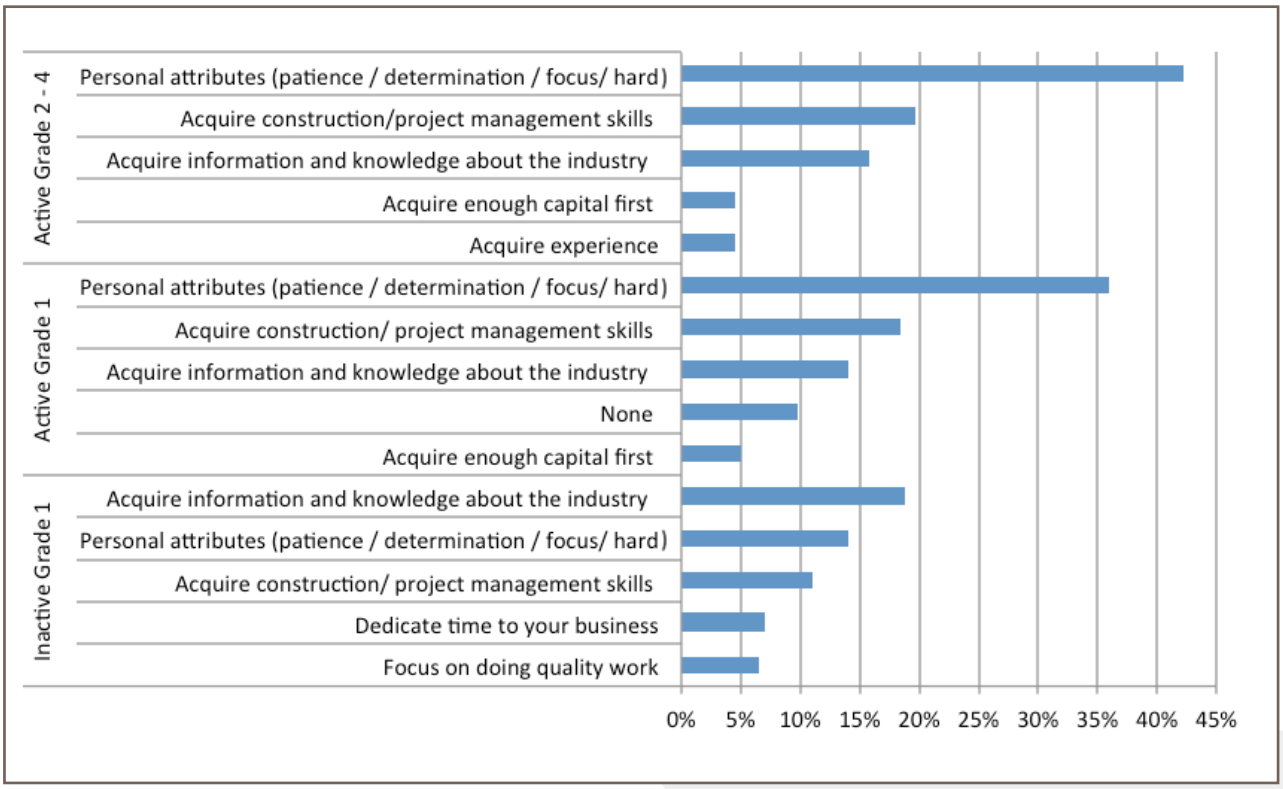


Fig. 49: Advice to entrants

In other countries, networking with trade and professional associations has been identified as the most useful source of support and information[44]. In contrast, government officials and government reports are amongst the least used sources of business information and, along with local authorities and the internet/library/press, are the least satisfactory[45]. However, this seems to be the converse with small contractors in South Africa. Trade and professional associations are generally unhelpful towards the entry-level contractors, and the various branches of government and the electronic sources are the main source of information and assistance.

2.2. INACTIVE CONTRACTORS IN cidb GRADE 1

Interestingly, despite the cidb categorising them as inactive on the cidb database, 62% of the contractors claimed they were still active in construction and only 38% confirmed they had left the industry. Those still active were mainly carrying out general building and maintenance work, but some had moved into building supplies (11%).

[44] Atkinson, J. and Hurstfield, J. (2003) Small Business Service Annual Survey of Small Businesses: UK 2003, Institute for Employment Studies, Brighton

[45] Ibid

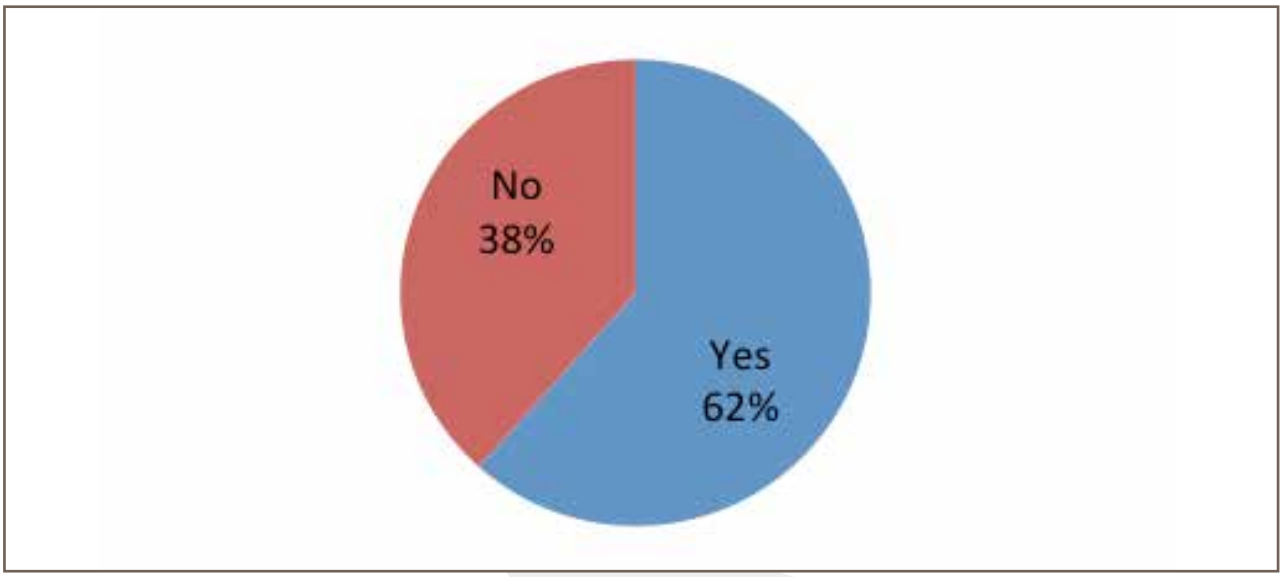


Fig. 50: Deregistered companies still active in construction

Profile of Inactive Contractors

Of the 38% who had left the industry, 28% had been active in construction for over two years, with 15% active for over five years. Most had therefore had some experience in the industry.

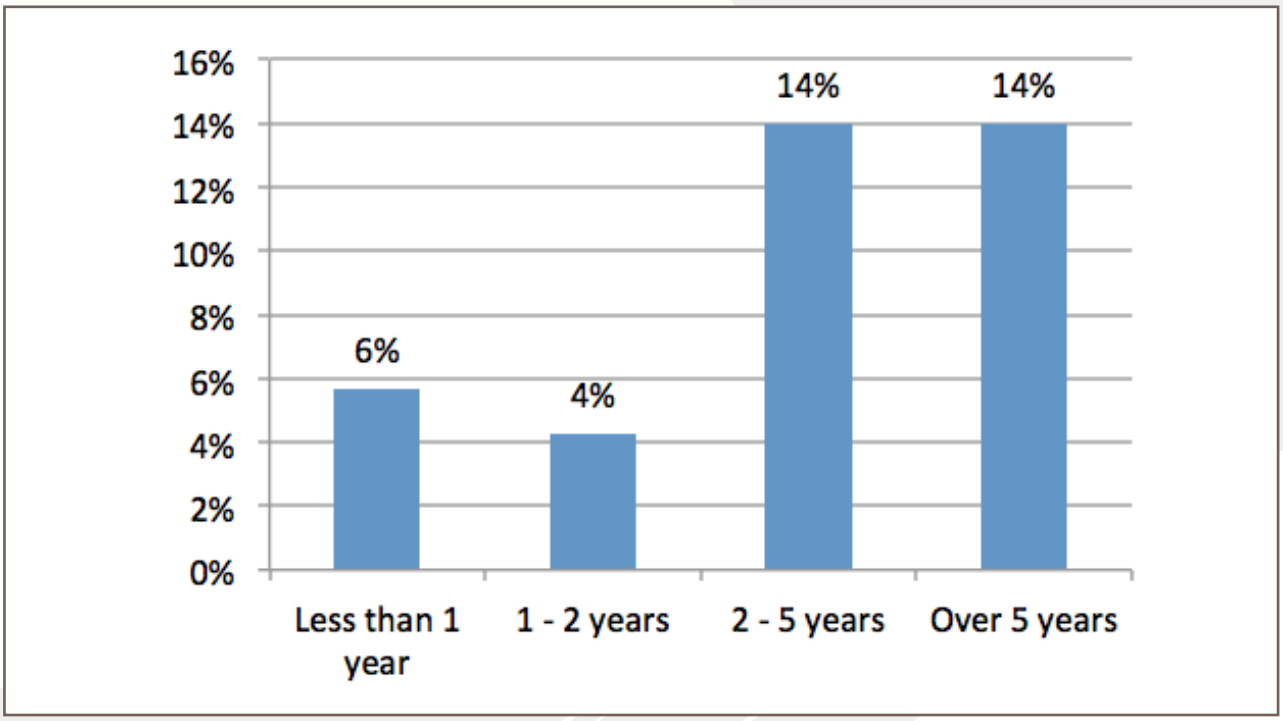


Fig. 51: Duration in the construction industry

There is no linkage between previous work experience in the construction industry, or the prior occupation of the owner, and whether the contractor was still in business. Previous work experience in the construction industry therefore does not seem to determine the contractor's survival and progression.

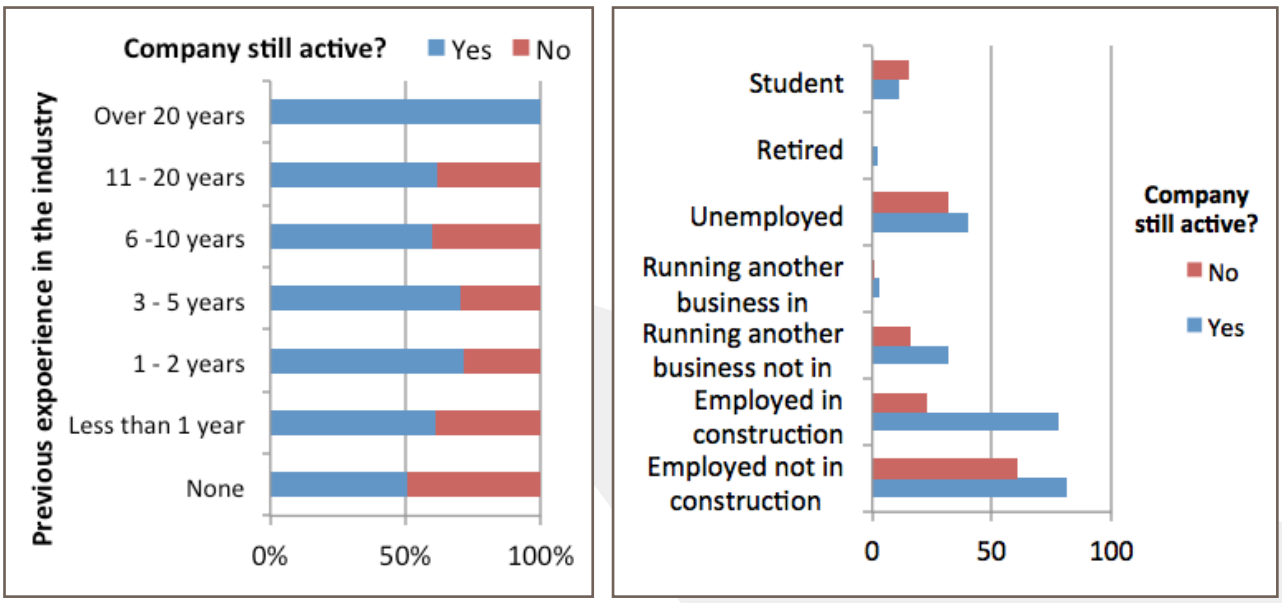


Fig. 52: Comparing previous work experience and if the contractor was still in business

Likewise, there is little correlation between the:

- Owner's level of education and the contractor's survival and progression;
- Owner's level of experience in the construction industry and the contractor's survival and progression; and
- Reasons for entering into the construction business and the contractor's survival and progression.

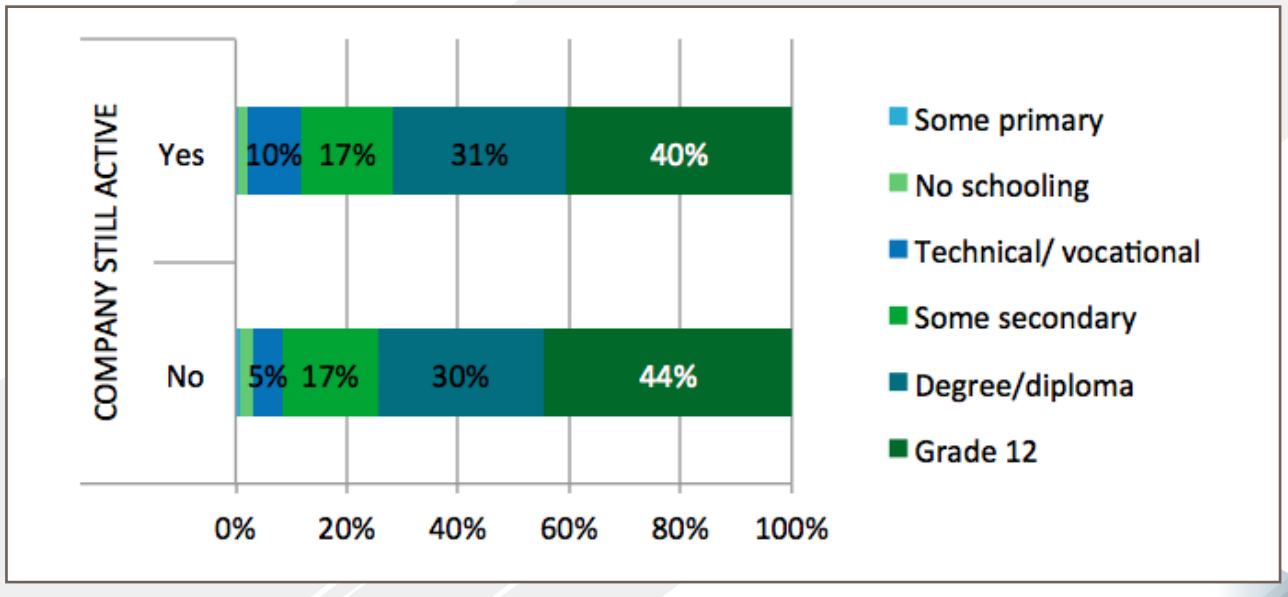


Fig. 53: Comparing the level of education and contractor's survival

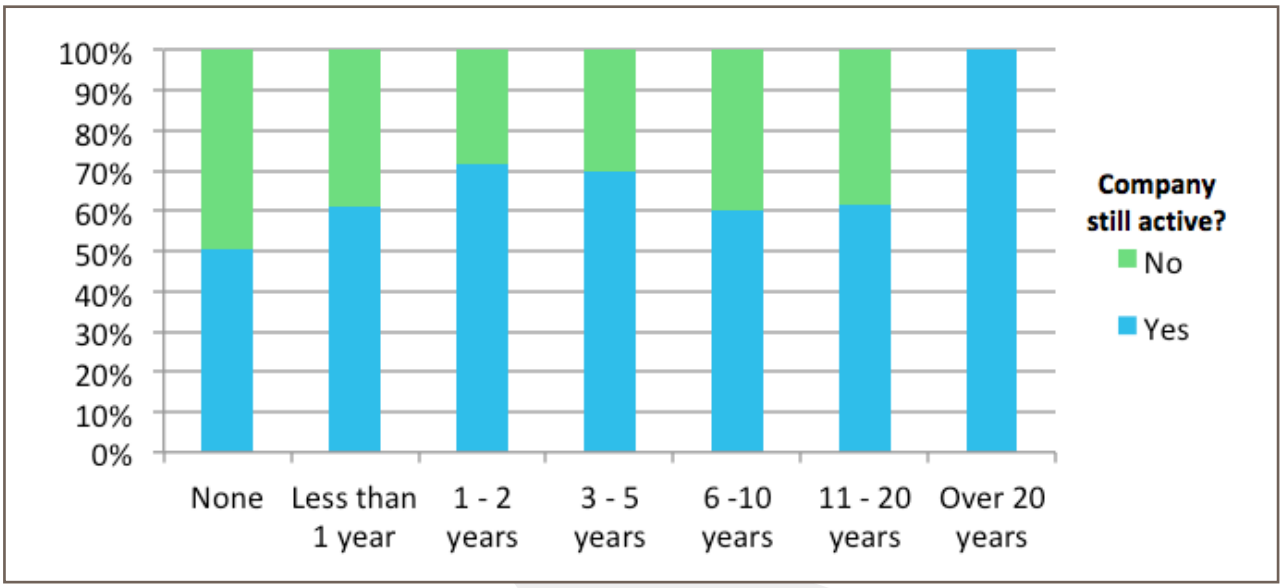


Fig. 54: Comparing years of experience in the industry and contractor's survival

There is a strong correlation between the contractor having construction-related training or qualifications and the contractor's survival and progression.

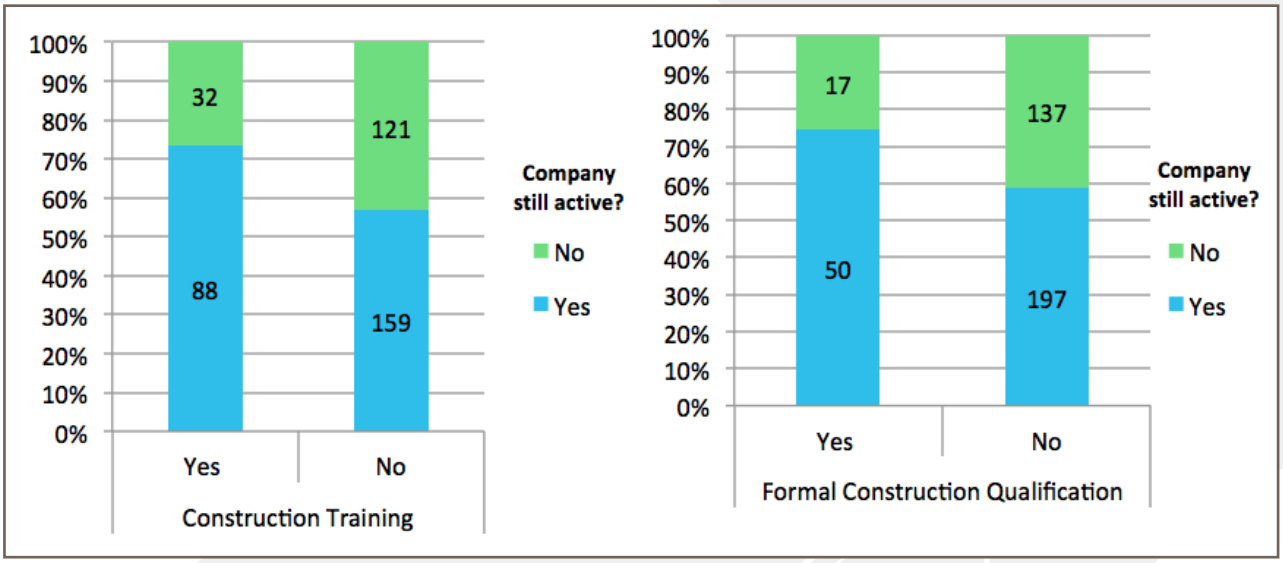


Fig 55: Correlation between construction-related training or qualifications and contractor's survival

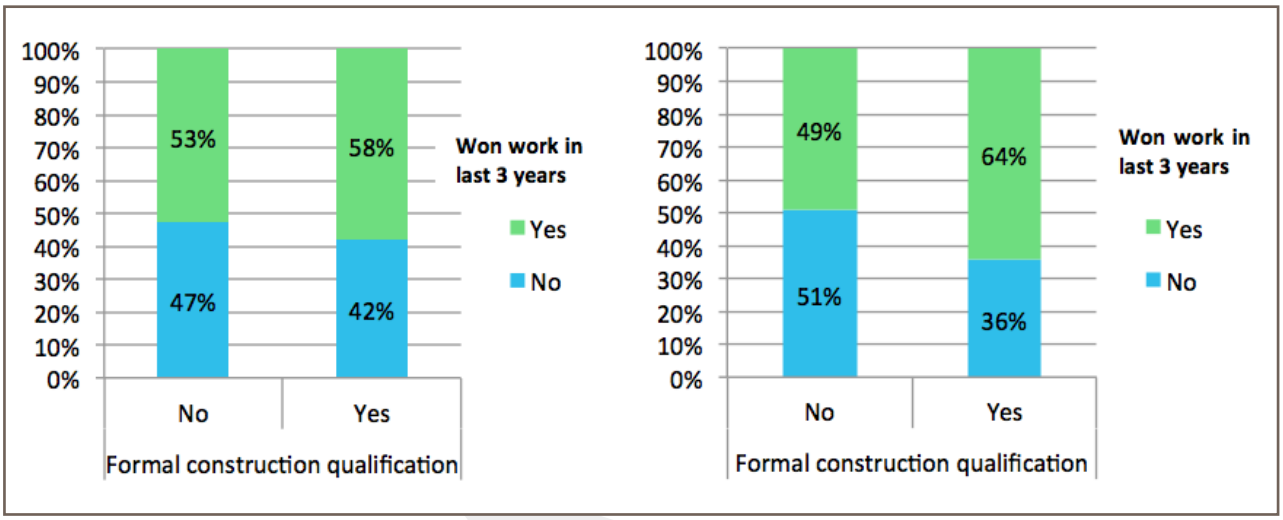


Fig 56: Correlation between construction-related training or qualifications and contractor's record in winning work

Reasons for de-registration

The companies that were no longer active on the cidb register cited a lack of finance and lack of work opportunities as their main reasons for not renewing their registration. 5% are not interested in construction work anymore, and 5% are not interested in public sector work and thus cidb registration. Ignorance, of the need to re-register (3%) or of the expiration of their registration (5%), was also cited for the non-renewal.

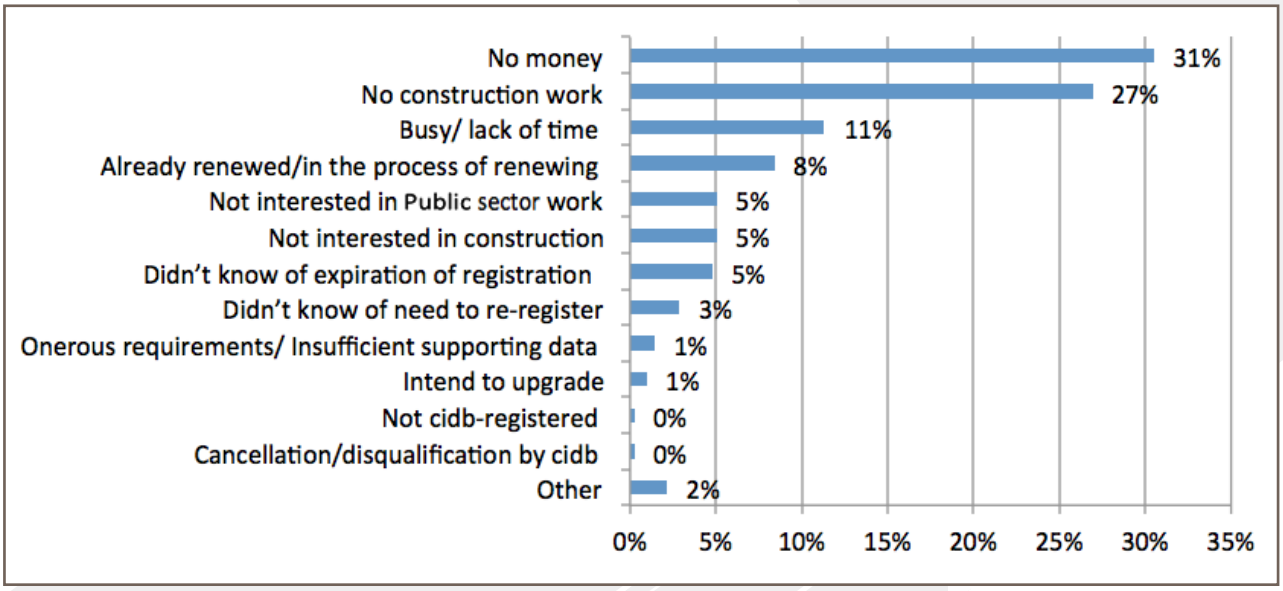


Fig. 57: Reasons for cidb deregistration

Survival rates amongst entry-level contractors are significantly low, especially in the informal sector, e.g., in the United States 50% of new employer firms survive at least 5 years while in comparison only 36% of construction companies survive beyond 5 years, the lowest survival rate of all business sectors[46]. The major causes of the failure in the US are highlighted below.

Table 7: Major causes of failures of new firms in the United States

MAJOR CAUSE	PERCENTAGE OF FAILURES	SPECIFIC PITFALLS
1. Incompetence	46%	Emotional pricing
		Living too high for the business
		Non-payment of taxes
		No knowledge of pricing
		Lack of planning
		No knowledge of financing
		No experience in record-keeping
2. Unbalanced experience or lack of managerial experience	30%	Poor credit granting practices
		Expansion too rapid
		Inadequate borrowing practices
3. Lack of experience in line of goods or services	11%	Carry inadequate inventory
		No knowledge of suppliers
		Wasted advertising budget
4. Neglect, fraud, disaster	1%	

Source: U.S. Department of Labor (2011)[47]

The leading management mistakes that lead to the failures are also typical, and are listed below:

- Going into business for the wrong reasons;
- Poor advice from family and friends;
- Underestimating time requirements and the commitment required to the business;
- Family pressure on time and money commitments;
- Lack of market awareness;
- Lack of objectivity on the viability of the product/business;
- Lack of financial responsibility and awareness; and
- Lack of a clear focus.

[46] U.S. Department of Labor (2011) Business Employment Dynamics, Bureau of Labor Statistics, www.bls.gov/bdm

[47] Department of Labor (2011) U.S. Department of Labor FY 2011 Annual Performance Report

In South Africa the complexity and risks involved in the construction industry have led to a high number of failures especially amongst new and small contractors. A number of studies on new and emerging contractors observe similar challenges and causes of failure. These revolve around:

- Low levels of experience and formal construction related training;
- Lack of required technical and managerial skills;
- Insufficient understanding of the contract documentation and the preparation and submission of tenders;
- Lack of access to finance;
- Lack of continuity in relation to type, scale and location of work;
- Lack of employment opportunities exacerbated by high competition among such contractors;
- Inadequate cash flows to sustain their businesses especially where there are delays in payment;
- Inability to meet guarantee and performance bond requirements;
- Low levels of entrepreneurial skills, specifically, opportunity scanning, initiative taking, persistence; assertiveness, self-confidence, systematic planning and problem-solving competencies; and
- Limited access to applicable and clear information and advice[48,49,50].

The findings of the survey therefore agree closely with the established research.

2.3. SUMMARY OF THE FINDINGS

2.3.1. The owner/manager profile

Gender and age

There is no difference in the age and gender profiles of contractors' in cidb Grade 1 and those in Grade 2 – 4. The contractors are largely males within the 25 – 54 age brackets, though there are slightly more females in the inactive Grade 1 sample (32%) compared to the active Grade 1 (27%) and Grade 2 – 4 (25%) contractors. Amongst all three groups most of the contractors had been in business for 5 – 10 years and the number of new entrants was not high.

Educational qualifications

The educational profile of Grade 1 and Grade 2 - 4 and inactive Grade 1 contractors is remarkably similar. Most have grade 12 (matriculation) education, with the next largest group having university or university of technology degree or diploma, and then some secondary. A very small number have construction-related qualifications, but also very few have no primary education whatsoever. A larger percentage (41%, 30% and 32% amongst Grade 1 and Grade 2 - 4 and inactive Grade 1 contractors respectively), have undergone some form of construction training.

[48] Malongane, D. (2014) Challenges Facing Emerging Contractors in Gauteng, unpublished MTech Thesis, Tshwane University of Technology

[49] Makhura, M. S. (2011) An Analysis of the Entrepreneurial Competencies of the Owners/Managers of Emerging Small Contractor Companies in the Construction Industry, unpublished MSc Thesis, University of the Witwatersrand

[50] Thwala, D. and Mvubu, M. (2008) Current challenges and problems facing small and medium size contractors in Swaziland, African Journal of Business Management Vol. 2 No. 5, pp. 093-098

Work experience in construction

Again, there is little difference between the three groups in terms of their prior experience in construction. A slight majority of the respondents in all three groups had worked in construction industry prior to setting up their own contracting company, and this figure was highest (by a small margin) amongst inactive Grade 1 contractors.

Economic activities prior to construction

For all three groups, 'Employed in a non-construction company' and 'Employed in a construction company' top the list of things that contractors were doing prior to setting up their current construction business. The third most likely response for prior economic activity in all three groups was "Unemployed'.

Time spent on the construction business

The construction business is the main activity for over half the respondents (53%) in Grade 1, 83% of the respondents in Grade 2 – 4 and 40% of the inactive Grade 1 contractors. It is hard to establish if the success (or survival) of the Grade 2 - 4 contractors is as a result of their spending more time on the business or if they spend more time because their companies are surviving/successful.

2.3.2. The company profile

Preference for the public or private sector

Contractors in Grade 1 are more likely to look for work in both the public and private sector compared to Grade 2 – 4, which could be as a result of trying to establish a reputation. Grade 2 – 4 contractors are more likely to specialise in the public sector.

Tenders submitted in the past three years

The majority of Grade 1 contractors are actively seeking work by submitting tenders, with 82% having done so in the last three years and 54% of those having won work. Grade 2 – 4 contractors submitted more tenders on average than Grade 1, but are also more likely to be invited, be eligible to participate for and to know the sources of tenders than Grade 1 contractors. Their knowledge of public procurement processes is also likely to be better. Amongst all the samples there was wide variation in the number of tenders submitted.

Main reasons for tendering success

All three samples place 'compliance with tendering requirements', 'experience in construction and/ or perceived ability to suitability to do the work' 'good pricing' in their top three reasons why they were successful in getting work. Apart from the fact that a large majority is not aware of where they fall short due to lack of feedback, 'Pricing', 'Corruption' and 'Lack of influence/ connections' were cited by all groups as the main reasons for unsuccessful tenders. However the Grade 2 - 4 contractors place more emphasis on competition as a reason for not winning work than the two Grade 1 groups.

2.3.3. Motivation to enter the industry

Reasons for entry

Entrants into the industry cite the likelihood of good financial returns as their main reason for setting up a construction company, followed by the need to earn an income due to unemployment or retrenchment and the desire to empower the community. Those who have been in the industry for longer were more likely to cite their knowledge of the industry, preference for the working conditions and the positive financial prospects as their reasons. Knowledge of the industry thus seems to be a good indicator of contractors more likely to sustain themselves.

The main challenges faced

The challenges facing the three groups of contractors are remarkably similar. These are around financial issues (sourcing funds to carry out projects, regular cashflows, being paid for work done) and getting steady work.

Support provided to entry-level businesses

Amongst all the three groups of contractors the majority claim they have received no help from anyone in setting up or running their businesses, and the few who have indicate that assistance came either from immediate family and friends or from government institutions. The kind of support they would like to receive is mainly accessing finance and assistance in securing work.

Knowledge of the industry

There is roughly a 60:40 split between those who felt they had sufficient knowledge of the industry before entering, and those who did not. This does not, however, seem to have any correlation with the success rate as evidenced by tenders won in the last three years.

Advice to entrants and the help they should get

Across the three groups skills training tops the list of assistance they feel entrants into the industry should receive, especially business management and construction skills. This is followed by access to finance, mentoring and business advice, and access to construction opportunities. These match the factors that contractors feel entrants need to have in order to succeed, that is, finance; business management and construction skills; and winning work through better marketing and knowledge about opportunities. Grade 2 - 4 and inactive contractors' emphasis personal attributes of the owner more, such as dedication, patience, strength and perseverance as the things entry-level contractors should have in order to succeed. Grade 1 contractors do not find this important, and this may well be the difference in their success and progressions to higher grades.

Similar studies conducted by cidb

It is to be noted that the cidb commissioned another skills survey which was published in 2011, focusing on General Building (GB) and Civil Engineering (CE) contractors registered in the cidb Grades 2 - 6.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1. Conclusions

The findings of this study confirm that Grade 1 contractors are typically small businesses with few employees, and the owner/manager plays an active role in the company. While they are formally registered businesses, they often lack formal business processes and have limited capital or access to funding. Most of the owners of Grade 1 construction companies have reasonably sound educational backgrounds and some knowledge and experience of the industry. However, they typically lack training in technical construction skills or in managing a construction business. Their main reason for entering the industry is an overly optimistic assessment of the opportunities, and returns, available therein, which is often proved wrong because of the intense competition and limited firm resources. As a result, most Grade 1 contractors subsequently feel there was a lot more they needed to learn about the industry before entry.

There are four types of contractors in the South African construction industry that can be derived from this study, outlined in Fig. 58 below.

ECONOMICALLY ACTIVE (FREQUENTLY RECEIVE TURNOVER FROM CONSTRUCTION WORK)			
		YES	NO
Active cidb registration	Yes	A. Registered & economically active contractors	B. Registered but dormant contractors
	No	C. Non-registered or de-registered but economically active contractors	D. Non-registered or de-registered & dormant contractors

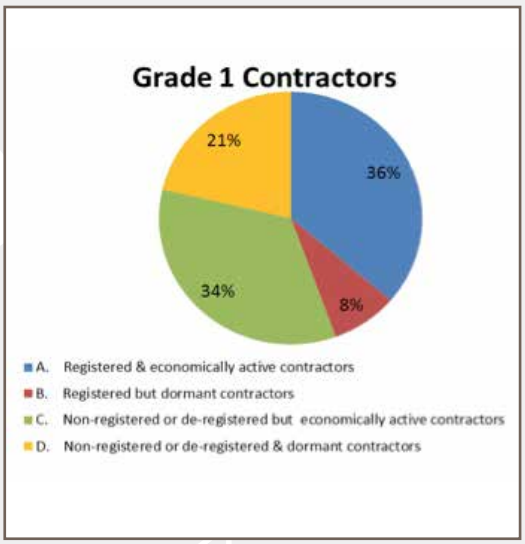


Fig. 58: Contractors in South Africa

The majority of Grade 1 contractors fall within groups A and C, and despite the scarcity of tenders are actively seeking work. There is however still a significant number of contractors who are not part of the cidb's register but still actively working as contractors.

Most of the projects carried out by Grade 1 contractors are, as expected, of low value and short duration, and a significant number of contractors have gone without a project in the last year. As most of them indicate that this is their main source of income, the lack of work is likely to see them exit the industry before long. Contrary to expectations, the private sector is a main source

of projects for Grade 1 contractors. These projects are typically in the form of small residential/ commercial developments for individual (as opposed to corporate) clients, and although this study did not explore the extent to which labour-only sub-contracting was used, it is likely that some of the projects were under this arrangement.

Tendering success is largely attributed to compliance with tendering requirements, which by all indications are onerous and a major challenge for Grade 1 contractors to become proficient at. This is largely true irrespective of the sector within which the contractor prefers to tender, whether for the public, private or both sectors. This includes the ability to price competitively and in a manner that is likely to allow for successful project completion. As the majority rely on publicly available sources for tendering information the degree of competition for such projects is evidently intense. This contributes to the difficulty of getting work in the industry.

Based on the findings of the interviews amongst the three categories of contractors, there are some indicators that can help to differentiate between genuine Grade 1 contractors and speculative Grade 1 contractors. There is little correlation between the owner's level of education, previous work experience in construction, and the reasons for entering into the industry and the contractor's propensity to survive, thrive and progress past cidb Grade 1. However, there is also a strong link correlation between the contractor having construction-related training or qualifications and the contractor's survival and progression. The degree of knowledge of the industry is important, especially considering that many of the contractors entered the industry under doubtful assumptions and are then likely to exit the industry. In time, though, there are strong indications to suggest that the 'speculative' contractors fade away and fail to renew their registration in Grade 1 after failing to get steady projects.

Considering that most of the contractors enter the industry out of (i) financial considerations and (ii) their (sometimes presumed) knowledge of and experience in the industry, it can be expected that in the absence of regulated entry-level requirements the number of industry entrants will continue to be high. In addition, the high rate of stagnation at Grade 1 and exit from the industry can also be expected to continue. It has been suggested that more attention should be paid to some level of barriers to entry in these sectors and to providing support to entrepreneurs once they have already become active in a sector.

The key factors that any such initiative should consider, and that this research has identified as important in the success and growth of contractors, are:

1. Formal training in technical construction skills;
2. Formal qualifications in technical construction skills and in managing a construction enterprise, and
3. Knowledge of the construction industry, in particular the construction and contracting processes (usually brought about by some level of experience in the construction industry) are a key issue affecting the success and failure of projects.

3.2. Recommendations

1. If the survival and progression rate of Grade 1 contractors is to be improved, there is a need to improve the support systems within the construction industry that aid Grade 1 contractors. This should be done with the support of other stakeholders in the industry who are perceived as not doing enough for the contractors, for example, voluntary associations for the professions and contractor trade and representative bodies. Government and state-owned enterprises are more active in providing such support and should also be included. The nature of such support should focus on components such as those in Table 8.

Table 8: Recommended support to Grade 1 Contractors

COMPONENTS	PROPOSED SPECIFIC SUPPORT
Training	On-site and formal training, seminars and workshops targeting a range of skills in executing construction work, managing construction projects, marketing and tendering, and managing a construction business
Mentoring	Access to mentors on various aspects of the construction business
Personal Development	Professionalism, leadership, life skills and personal development, goal setting, team building, presentation and negotiation skills
Business Guidance	Options in company and career development, business specialisation.
Business Information and Systems	Business processes, systems, software, templates and tools; industry information
Networking and Exposure	Networking opportunities with other established contractors, industry organisations and stakeholders, suppliers, clients, consultants, specialist businesses, contractor development programmes and BEE opportunities
Access to finance	Information on where and how to access finance, assistance in pre-paring applications for financing, networking with financial institutions, information on alternatives to financing and trade credit e.g., invoice financing

As the majority of Grade 1 contractors are ‘owner/managers’, interventions to uplift construction companies should be directed to individuals (owner/managers). The personal attributes of the owner (e.g. dedication, patience, strength and perseverance) have been identified as critical to the success and progression of contractors at all levels. There is therefore support for more emphasis to be placed on such soft skills and attributes, for example through life skills training.

2. The lack of adequate knowledge about the industry and the challenges of working in it is a key factor in the large number of entrants into the industry and the large number of contractors exiting the industry (or becoming inactive on the register). The provision of such information to prospective Grade 1 contractors through for example, the cidb contact centres, will make them more aware

of the challenges in wait. This could extend to a checklist before registration, assessing whether contractors have any of the following:

a) Construction-related qualifications
b) Construction-related training
c) Basic knowledge of the industry

The findings of such a checklist could then be a prerequisite for registration, contractor development or contractor support by the cidb, as proposed in (1) above.

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