
**SOCIO ECONOMIC FACTORS TOWARDS THE SUCCESSFUL COMPLETION OF
PROJECTS OF EMERGING CONTRACTORS IN GAUTENG PROVINCE
SOUTH AFRICA**

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ABSTRACT

The purpose of the study was to identify and quantify socioeconomic factors that affect the successful completion of projects undertaken by emerging construction companies in Gauteng Province, South Africa. The study was motivated by the high failure rate among emerging and newly established contractors in the construction industry. Data was collected by use of a structured questionnaire and in-depth interviews from a stratified random sample of size 273 emerging contractors. The study revealed that the successful completion of projects was significantly influenced by 3 factors: the ability to avoid deviation costs, carrying out regular inspections at each phase of the construction process and adherence to legal requirements during construction in a decreasing order of strength. Furthermore in-depth interviews showed that some emerging contractors failed to complete projects on time due to lack of financial resources exacerbated by late payments by the client, lack of technical skills and were unable to win sizeable construction contracts due to intense competition from well-established construction companies

Key Words: Socio economic factors, Emerging Contractors, Gauteng, South Africa.

INTRODUCTION

The construction industry is regarded as one of the key drivers of economic expansion and employment creation. It performs an indispensable role in the economy of any nation and its activities affect everyone's lives in one way or the other. Since the work is normally carried out in the open, uncertain weather conditions to a certain extent affect the progress of construction, often the project overshoots the target date and exceeds the budget estimate. This is the reason why the industry has been continuously striving for better methods of working to achieve quality objectives in totality for many years. Unfortunately, the quality of services and facilities is still the root cause of many problems (Chan & Ada, 2004: 203-221). In South Africa, the construction industry can be viewed as a combination of two classes in which one class is fit for competing in the market whereas the other class is unfit for competing in the market. Harris and Patten (2014) have pointed out that small, micro and medium-sized enterprises (SMMEs) in the construction industry need to develop both skills and capital in order to be viable on a sustainable basis. According to the South African Construction Industry Development Board (CIDB) (2015),

an emerging enterprise means an enterprise which is owned, managed and controlled by black people (previously disadvantaged persons)

The National Small Business Act 102 of 1996 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. Micro-enterprises on the other hand are owner-managed small businesses with few employees/family members, operates on the fringe of formality, lack tax registration, formal business premises or operating permits, lacks formal accounting procedures, have limited capital bases, have basic technical or business skills and can make the transition to viable formal small businesses. Small firms are usually owner-managed, employ between 5 and 50 people, operate from formal business premises and meet formal registration requirements. Medium firms are usually owner-managed, employ up to 200 people and have capital assets of up to R 5 million. This study focuses on the emerging contractors (SMMEs) as defined above.

CIDB's contractor grading designation is determined by contractor's financial capability and works capability. Financial capability relates to financial history (turnover), and the amount of working capital a contractor can muster to sustain a contract, i.e. available capital. Available capital is

determined from the liquid cash resources available, loans that may be leveraged and any financial sponsorship. Works capability is determined by the largest contract undertaken and completed in the contractor's class of construction works (completed during the 5 years immediately preceding the application).

Legacies from the past prohibit black-owned enterprises from taking part in advanced construction projects. The South African construction industry is currently dominated by the discrepancy between white and black-owned enterprises. This has adversely affected black-owned enterprises mainly attributed to historical deficiencies in racially skewed education system, income and economic empowerment (Berry, Von Blottnitz, Cassim, Kesper, Pajaratram & Seventer, 2002:8) which has resulted in socio economic development challenges which require a concerted effort from all sectors of society: governments, corporates and individuals working together to find solutions. Socio-economic factors include but are not limited to high unemployment and low incomes, poor standards of education which make it hard for school leavers to become productive in the economy, unsustainable business practices, high crime rate etc.

Since April 1994, more black South Africans have managed to study engineering, architecture and building construction, however, the duration since 1994 has not been long enough to produce adequately trained and equipped black contractors. The majority of emerging contractors in the Province of Gauteng are poorly equipped, poorly trained and poorly networked. Large contracts in construction are often awarded to well-equipped and well established contractors. As a result, emerging contractors fail to secure large contracts in the construction industry. Easton (2016) has pointed out that it is essential to have advanced skills and adequate capital in order to secure contracts in the construction industry. El Asmar, Hanna and Loh (2013) have shown that the

failure of newly established construction companies to secure large contracts is often attributed to poor networking skills, inadequate capital and poor skills. They have pointed out that emerging contractors need to be assisted in order to develop adequate capacity for competing in the market. In this context, the primary objective of this article is to determine the socio economic factors that prevent the successful completion of projects undertaken by emerging contractors. Doing this could provide additional insights related to the prime factors affecting the development of emerging contractors in Gauteng. The assumed research problem, therefore, states that 'socio economic factors constitutes a significant barrier to the successful completion of projects in Gauteng province, South Africa'. The importance of the article is underpinned by the need to examine why emerging contractors fail to complete construction projects on time, within budget and required quality.

LITERATURE REVIEW

A. Challenges in Managing Projects

Worku (2016) has pointed out that emerging contractors in the South African construction industry are characterized by failure to complete projects within time and budget without compromising quality specifications due to lack of specialized skills, lack of capital and inability to compete with well-established construction companies. Examples of challenges that are commonly faced by emerging contractors are failure to adhere to approved plans of action due to lack of capacity, failure to adhere to project scopes and work breakdown structures, lowering quality standards, delay in the completion of projects, and failure to account for expenses. In this regard, a good example is the case of RDP (Reconstruction and Development Programme) construction projects in which houses were constructed for the poor under sub-standard quality specifications. Walton (1986) has reported that above 75% of all construction projects that are undertaken by companies that lack specialized skills in construction engineering fail. A similar assessment has been made by White and Cheong (2012), a construction project is said to be successfully completed if the entire scope of the project is completed within time and budget without compromising quality specifications. According to Toor and Ogunlana (2009) a project is successful if it is: completed on time, within budget and to specified quality; safety, efficiency, effectiveness, free from defect, meets stakeholders' expectations, and minimal construction disputes and conflicts.

Pillay (2006: 121) postulates that some of the most important reasons for project failure are:

- A lack of user involvement – all stakeholders must be involved from the inception to the completion of the project;
- Long or unrealistic time scales – the key recommendation is that the scope of work of complex projects could be subdivided into a number of smaller manageable units of work called work packages;
- Poorly defined project outcomes – requirements and specifications must be clearly defined;
- Scope – changes must be closely controlled and monitored to avoid growth in the scale of a project; and

- A lack of a meaningful change control system – uncontrolled changes cause chaos with a structure under development. As a result, the recommendation is shorter time scales and a phased approach.

B. Factors that Affect Entrepreneurial Activities

In South Africa, the overall levels of education and training, social and cultural norms and the regulatory environment play a highly significant role in determining the level of early-stage entrepreneurial activity. education does not play as significant a role as it does in South Africa. Global Entrepreneurship Monitor (GEM) research has shown that South Africa lags behind other developing countries in promoting early-stage entrepreneurial activity.

According to Herrington, Kew and Mwanga (2016), it is important to ask why South Africa's early stage entrepreneurial rate is so low. What factors have led to the low level of early-stage entrepreneurial activity and what can be done to improve it?

- A low level of overall education, especially in Mathematics and Science.
- A difficult regulatory environment.

RESEARCH METHODOLOGY

The design of study was descriptive and cross-sectional. It was descriptive because the aim of the study was to explain and describe socio economic factors that affect the capacity of construction companies in Gauteng Province to complete construction projects successfully (within time and budget, without compromising quality specifications). The study was cross-sectional because data was collected from the 273 companies that were selected for the study only once during the course of study.

DATA COLLECTION

Data was collected from each of the 273 construction companies that were selected for the study by using a structured, pre-tested and validated questionnaire consisting of 20 indicators of efficiency in the management of construction projects. Each of the 273 respondents of study had to provide answers to 20 questions related to project management in the construction industry. Measurements of perceptions were done by using a 5-point ordinal scale. Face to face interviews were conducted for ensuring validity.

FINDINGS AND DISCUSSION

The overall aim of the study was to assess and evaluate the degree to which emerging contractors working in the construction industry of Gauteng Province could complete projects successfully within budget and time without compromising quality specifications. The study was conducted by collecting data from a stratified random sample of size 273 companies operating in the various parts of Gauteng Province. Data was gathered by use of a structured questionnaire and in-depth interviews. The sample size of the study was equal to $n=273$. A combination of

quantitative and qualitative methods of data collection and analysis were used for conducting the study.

Results obtained from the study showed that 243 of the 273 companies in the study (89.01%) completed projects successfully, whereas the remaining 30 companies (10.99%) failed to complete projects successfully. The successful completion of projects was significantly influenced by 3 factors: the ability to avoid deviation costs, carrying out regular inspections and at each phase of the construction process and adherence to legal requirements during construction in a decreasing order of strength. Other factors include: the practice of proper handover of all project deliverables at the end of construction, the practice of documenting all processes and work-related instructions, and the provision of training opportunities to employees, in a decreasing order of strength.

The study conducted by Tshivhase (2012) shows that emerging contractors face immense competition from well-established construction companies, and that it is prudent for them to partner with well-established and adequately resourced construction companies in order to gain the necessary technical skills and financial support they require. Comments from the study indicated the following challenges: late payments from the client (especially government) results in the contractor not being able to purchase the required materials on time, some of the well-established companies would subcontract emerging contractors only to refuse to give them a project completion certificate once the project is completed, because they fear that once the emerging contractors submit all the required documents to CIDB for an upgrade, they will move up to higher grades ending up competing with the very same big companies and some emerging contractors would be paid by the client but they would use the money for personal/ family related matters as a result they would fail to purchase all the necessary materials or they would go for cheaper materials for the project which exacerbates the problem.

Watson and Everett (1996) 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. According to Katz and Gartner (1988), after entering the entrepreneurial world those with higher levels of education are more successful because their education:

- makes them more conscious of the realities of business, and
- places them in a position to use their learning to manage the business.

According to Barlow (2009), construction management is traditionally broken down into four primary categories: cost, schedule, safety and quality. The first three are well understood and clearly defined by the construction industry, but the term "quality" continues to be treated like a mystery. easily be quantified. However, when a project experiences poor quality, it leads to rework which can be difficult to quantify.. In construction, the direct costs of rework (termed deviation) can be as high as 12% of total costs (Burati and Farrington, 1987), inaccurate material estimating and project complexity are some of the problems experienced by emerging contractors. Rework costs may lead to financial constraints, which leads to project failure because the contractor cannot buy building material and cannot afford to pay employees.

Financial support continues to be one of the impediments of small business growth. Despite various public agencies established to finance and nurture emerging entrepreneurs in South Africa, these initiatives have failed to cater for most of entrepreneurs in need for backing (Tshivase, 2012:110). Many entrepreneurs raise the start-up capital from their own or family savings rather than approaching formal institutions or agencies, this is not enough to cater for material, labour costs etc. resulting in financial constraints which affects the project. Financial institutions generally require collateral and formal business records as criteria for considering a loan - as a result, business owners who lack collateral or who have not kept formal records for their business are less likely to be successful in approaches to financial institutions. Given that start-up funding for small businesses often comes from personal savings or money from families, the youth, women and people in rural areas are likely to be particularly disadvantaged in their attempts to start or sustain small businesses and those who have the little financial resources should be careful how they use it. It is important to note that although access to finance is a necessary factor in growing entrepreneurial activity, it is not a fundamental factor. Providing finance in the absence of adequate infrastructure, market opportunities and business and management skills is unlikely to lead to an increase in the number of successful businesses (Herrington et al, 2016:49). With regards to finance support, Nieman & Nieuwenhuizen (2009:35) point out that SMMEs are regarded as “high-risk businesses, somehow this explains why banks are always hesitant to give funding to emerging enterprises

Carrying regular inspections / audits due to lack of Technical Skills

According to CIDB (2015), new entrants into the industry, typically lack training in technical construction skills or in managing a construction business, lack formal business processes and have limited capital or access to funding. 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. Organizational skills are key to the success of project management implementation in the light of the skills gaps evident amongst emerging contractors bequeathed by the apartheid legacy. The skills deficiencies perpetuated by a legacy of sub-standard education, limited professional training and limited construction experience all crystallise into an amalgam that is inimical to successful project implementation (Akaba et al, 2016:5). Due to lack of technical skills and experience it is highly unlikely that contractors would conduct regular inspections let alone audits at every stage of the construction process.

Compliance to statutory and regulatory requirements

According to Watson (2017), the requirements to manage legal compliance and focus on customer satisfaction are both core drivers of quality and business success. Statutory and regulatory requirements require compliance with certain activities to be implemented at different levels of the organization. In South Africa, regulations that are mostly applicable are the National Building Regulations and Standards Act (Act 103 Of 1977), Occupational Health and Safety Act (No. 85 of 1993), NHBRC Home Building Manual. Rincon, 2010 asserts that statutory and regulatory standards ensure that services provided by the organizations meet the minimum

standards of quality, stability, safety, security, and reliability, as expected under certain criteria. Traditional project management methodology assumes that the project team know the regulatory standards and, therefore, the technical requirements and design specifications, and the development itself reflects those standards, down the line if the structure or components do not conform to those standards, this leads to rework with its consequent over budget and delays.. Non-compliance to regulations may restrict the ability of an organization to operate and may carry penalties or sanctions that may

Ability to avoid deviation costs

According to Barlow (2009), construction management is traditionally broken down into four primary categories: cost, schedule, safety and quality. Financial constraints resulting from inaccurate material estimating, changing scope of work by the client, rising material costs, delayed payments by the client (especially government) affect projects in a negative way. At the same time financial support continues to be one of the impediments of small business growth. Despite various public agencies established to finance and nurture emerging entrepreneurs in South Africa, these initiatives have failed to cater for most of entrepreneurs in need for backing (Tshivase, 2012:110). Many entrepreneurs raise the start-up capital from their own or family savings rather than approaching formal institutions or agencies, this is not enough to cater for material, labour costs etc. resulting in financial constraints which affects the project. Financial institutions generally require collateral and formal business records as criteria for considering a loan - as a result, business owners who lack collateral or who have not kept formal records for their business are less likely to be successful in approaches to financial institutions. Given that start-up funding for small businesses often comes from personal savings or money from families, the youth, women and people in rural areas are likely to be particularly disadvantaged in their attempts to start or sustain small businesses and those who have the little financial resources should be careful how they use it. It is important to note that although access to finance is a necessary factor in growing entrepreneurial activity, it is not a fundamental factor. Providing finance in the absence of adequate infrastructure, market opportunities and business and management skills is unlikely to lead to an increase in the number of successful businesses (Herrington et al, 2016:49). With regards to finance support, Nieman & Nieuwenhuizen (2009:35) point out that SMMEs are regarded as “high-risk businesses, somehow this explains why banks are always hesitant to give funding to emerging enterprises

CONCLUSION

The specific objective of study was to identify and quantify socioeconomic factors that affect the successful completion of projects undertaken by emerging contractors and what contractors can do to acquire skills that will assist them in managing projects successfully within time, budget and the required quality. The findings revealed that successful completion of projects was significantly influenced by 3 factors: the ability to avoid deviation costs, carrying out regular inspections and audits at each phase of the construction process, and adherence to legal requirements during construction, in a decreasing order of strength, A study conducted by the CIDB for grade 1 contractors suggests that while most owners of grade 1 companies are formally registered, they often lack formal business processes and have limited capital or access to

funding, most 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

It is the recommendation of this study that government and industry regulation bodies where possible should take appropriate remedial actions which will:

- Provide practical training, mentoring and capacity building programmes to emerging contractors in order to enable them to improve their CIDB grades;
- A comprehensive monitoring and evaluation programme should be provided to emerging and newly established contractors operating in the construction industry so that programmes of assistance offered by State Enterprise Development Agency (SEDA), Gauteng Enterprise Propeller (GEP) and Department of Trade and Industry (DTI) could be utilised more effectively. In this regard, emphasis should be placed on the creation of a supportive business ecosystem through an increased budget allocation (access to grant and finance) to ensure inclusive growth for black emerging contractors; this should be coupled with a mandatory payment schedule for SMME doing business with the state. It should be mandatory for government departments to pay SMMEs for work done within the agreed time frame.
- An awareness campaign should be rolled out to SMMEs operating in the construction industry in order to increase awareness about programmes of support that are provided by SEDA, GEP and DTI. Such a campaign should be focused on financial, non-financial and mentorship activities; and
- Government should provide a specialised assistance to previously disadvantaged and underprepared emerging contractors. Such a programme of assistance should target emerging contractors in the lower CIDB grades and should encourage construction companies with higher CIDB grades to work with these emerging contractors with a view to build capacity in emerging contractors. Incentives should be provided to well-established construction companies that transfer specialised skills to emerging contractors.

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