# CCC 2018

Creative Construction Conference 2018, CCC 2018, 30 June - 3 July 2018, Ljubljana, Slovenia

# Identification factors influencing accessibility of credit for small and medium contractors in the construction industry

Olanrewaju Abdul Balogun[a], Nazeem Ansary[b], and Justus Agumba [a,b,*]

[1]*Department of Construction Management and Quantity Surverying, University of Johannesburg.lbalogun@uj.ac.za*
[1,]*Department of Construction Management and Quantity Surverying, University of Johannesburg nansary@uj.ac.za*
[3]*Department of Construction Management and Quantity Surverying, University of Duban*
*JustusA@dut.ac.za*

## Abstract

Small and medium enterprises (SMEs) have an important role in the economic development in South Africa. (SMEs) caused competition becomes increasingly fierce. This made construction (SMEs) experiencing more challenge to be able to access credit from financial institution. This paper aims to propose a conceptual framework for credit accessibility among construction SMEs. Several factors are preventing SMEs contractors in accessing credit from financial institutions such as: lack of collateral, high interest rate and bank changes, lack of owner's contribution, lack of good business plan development, lack of excellent managerial skills, lack of business skill and lack of binding building contact agreements. The survey method and self-administered questionnaires were used for data collection. 179 respondents took part in the survey. Data was analysed with binary logistic regression. The results indicate that Age of the firms, ownership structure, company tax number, and location of the business, current position, managerial competencies, and incorporation are significant determinants of credit accessibility for construction SMEs. These findings could be useful to others SMEs sectors in identifying credit approval in credit application from the financial institution in South Africa.

*Keywords: Credit accessibility, factors influencing, SMEs contractors, South Africa*

## 1. Introduction

Small and medium enterprises (SMEs) are increasingly seen playing an important role in the economies of many countries. Thus, governments throughout the world focus on the development of the SME sector to promote economic growth. In South Africa, SMEs contribute 56% of private sector employment and 36% of the gross domestic product Ntsika Enterprise Promotion Agency, [18]. South Africa suffers from high unemployment with an official estimate of approximately 24.5% of the economically active population unemployed (Statistics South Africa, 2009). One of the best ways to address unemployment is to leverage the employment creation potential of small businesses and to promote small business development (Fin Mark Trust, 2006). The National Small Business Act of South Africa of 1996, as amended in (2003), describes SMEs as a separate and distinct entity including cooperative enterprises and

Corresponding author: lbalogun@uj.ac.za/ balogununlimited@gmail.com

non-governmental organizations managed by one owner or more, including its branches or subsidiaries if any is predominantly carried out in any sector or sub-sector of the economy mentioned in the schedule of size standards.

Despite their importance to the economy in South Africa, small and medium construction enterprises (SMEs) sector is described as largely underdeveloped and lacking the managerial and technical skills and sophistication enjoyed by larger well established firms [8].[15] opined that lack of knowledge including knowledge of pricing procedures, contractual rights and obligations; law, management techniques and principles as well as technology were a challenge to construction SMEs.

Furthermore, SMEs are more likely to have limited formal education, which is based on a construction craft or trade training such as carpentry, plumbing, electrical installation and bricklaying. This training is probably in the form of learnership [7]. Past studies in South Africa revealed constraints and challenges of capacity and financial resources among SMEs [9]; [3].[12] inferred that SMEs are not able to access finance or credit hence it stifles their growth and capability.

The concept of credit has been in existence as long as there has been civilization. It predates, by a considerable length of time the use of money, and written references to it appear as far back as in the code of Hammurabi, established around 1750 B.C. From its beginnings, credit has been used as a selling tool, to bind customers to a particular vendor and allow them to acquire more substantial goods for which they do not have the necessary capital [14]. The theory of credit emphasizes that financial institutions would be more willing to extend credit if, in case of default, they could easily enforce contracts by forcing repayment or seizing collateral. The amount of credit in a country would depend to some extent on the existence of legislation that protects the creditors' rights on proper procedures that lead to repayment [1].

The initial capital and expansion capital fund for South Africa construction SMEs has been a perpetual problem even though the government continuously strives to empower this sector into the mainstream economy. Credit gap still exists between the supply capabilities of financing sources and the demand needs for capital for construction SMEs. According to [2] Confirmed that Small and medium enterprises therefore have been one of the major areas of concern to many policy makers in an attempt to accelerate the rate of growth in low-income countries. In spite of this potential, a number of problem among which access to funds is a major concern confronting the growth of SMEs sector? In most countries, banks are major players in the provision of debt capital to SMEs. They do so by providing short, medium and long-term loans, and other credit facilities like letters of credit, investment advice, etc.

This study therefore filled the gap using the Binary Logistic Regression analysis to establish which variables are the more critical as well as the strength of the inter-relationship between the dependent variable which is access to credit by the construction SMEs and a number of explanatory or independent variables such as Age, ownership, location of the business, accounting records, business plan personal collateral, current position, firm tax number.

## 2. Literature Review

### 2. 1 Challenges preventing construction SMEs from accessing credit

According to [4], results, the factors that stifle SMEs from accessing credit are, management expertise, high default rate and monitoring as the challenges banks faced in giving credit to SMEs. [6] Found that the key challenges that make it difficult for SMEs to access finance include policy regulation, inadequate financial infrastructure, stringent collateral security requirement, and lack of institutional capacity of SMEs sector. The key barriers identified include informational barriers, lack of managerial skills within SMEs. [17] found that financial activities such as business registration, documentation/recording, business planning, asset ownership, impact heavily on SMEs access to bank credits.

Other challenges that SMEs encounter when trying to access finance can be due to an incomplete range of financial products and services, regulatory rigidities or gaps in the legal framework, lack of information on both the banks and the SMEs side. Banks may avoid providing financing to certain types of SMEs, in particular, start-ups and very young firms that typically lack sufficient collateral, or firms whose activities offer the possibilities of high returns but at a

substantial risk of loss. There are many challenges to construction development and growth. These include policies regulations, inadequate financial infrastructure, firm regulations, trade regulations, tax regulations, changing government policies, tax rates, corruption, labour regulations, cost of capital, and keen competition for limited opportunities [15].[13] argued that factor like availability and cost of finance are the most common constraints faced by SMEs. Others are lack of collateral, informational barriers, regulations and rules that impede construction firms access to finance, the legal framework and policies around investment and financial institutions (FI's) lending are fundamental, lack of access to appropriate technology, weak institutional capacity, lack of management skills and training in the construction firms, and  lack of proper book keeping. The legal and regulatory frameworks that exist in Ghana also fail to provide the right support infrastructure to facilitate SMEs lending by the financial institutions. The lack of collateral, lack of proper financial management, lack of fiscal incentives for SMEs, strict prudential regulations which restrict flexibility of FI's, unduly complex or onerous administrative procedures and even simply the lack of a consistent definition or enabling law for SMEs are some of the impediments to SMEs financing. Even though SMEs tend to attract motivated managers, they can hardly compete with larger firms.

[5] reviewed that entrepreneurs face several problems in their efforts to access finance, particularly from banks; viz., lack of collateral security, refusal to use own collateral, failure to make a remarkable own contribution, blacklisting, failure to review attractive financial records and/or business plans and high risk of small entrepreneurs. [11] explicates that lack of collateral is the most widespread problem, particularly if the entrepreneur is applying for working capital. Other issues affecting the decision to provide finance include blacklisting, and inadequate financial records. The report concluded that, based on international comparisons, for a significant proportion of unsuccessful applicants, the failure of the application would not seem to be entirely unreasonable.

[19] The Organization for Economic Cooperation and Development (OECD, 2006) argued that banks may avoid providing finance to certain types of SMEs, in particular, start-ups and very young firms that typically lack sufficient collateral, or firms whose activities offer the possibilities of high returns but at a substantial risk of loss [19]. It can be suggested from these discussions that different set of challenges prevents SMEs from accessing finance. Hence, the importance of determining the challenges faced by SMEs in the South Africa construction industry from accessing credit.

**2.2 Conceptual framework**

The conceptual model indicates the relationship of the demographic characteristics of the SMEs respondent and the company profile. These variables include; gender, age group, current position, company tax number, location of the company, type of business ownership, collateral and credit accessibility.
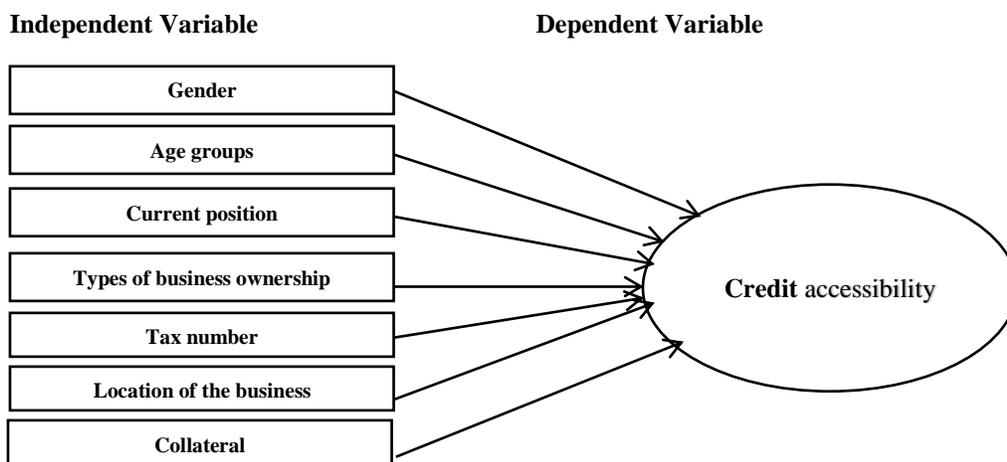


**Diagrammatical Representation Showing the Independent Variable linked to the Dependent Variable Credit Accessibility**

**2.2 Operationalisation of the conceptual framework**

The model is made up of dependent variables which were dichotomous; credit accessibility defined by (I did access credit and did not access credit) and (I accessed full credit and I accessed partial credit ) and independent variables which are; gender, age group, current position, type of business ownership, business tax number, location of the company and collateral. The mathematical model 1 which is a general equation for logistic regression was used for this study to predict the independent variables influence on credit accessibility. This can be written as:

$$\ln (p/1\text{-}p) = \beta 0 + \beta 1 x 1 + \beta 2 x 2 + \ldots + \beta k x k \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots ..(1)$$

The specific logistic regression for the study was modelled as follows:

$$\ln (p/1\text{-}p) = \beta 0 + \beta 1 \text{Gender} + \beta 2 \text{Age Group} + \beta 3 \text{CurPostion} + \beta 4 \text{TypesBusOwnSh} + \beta 5 \text{TaxNo} + \beta 6 \text{LocBus} + \beta 7 \text{Collateral } \varepsilon$$

## 3. Research method and design

A quantitative philosophy were adopted for this study, which involved the use of structured questionnaire in an in-depth survey of the objectives set in this research.[2] describes a survey as a quantitative or numeric description of some fraction of the population – the sample, which enables researchers to generalize their findings from a sample of respondents to a population within the limitations of the sampling method. Convenience sampling which is a non-probability method was used where the researcher selected sample members to conform to the required criterion. The study population consisted of contractors registered with the CIDB. These were contractors registered from grade 1 to 6. The questionnaires were completed anonymously; therefore, the collection of the data and the presentation of this report cannot harm the respondents or their employing organizations in any way. 179 SMEs completed the questionnaire survey in the period August to November 2017, using the drop and collect method and email. [3] supported this approach. This ensured the increase of the response rate. Content validity was conducted on the questionnaire using pilot study administered to 30 construction SMEs. The content validity determined the clarity and content adequacy of the questions asked. Furthermore, it validated the time taken to complete the questionnaire.

The questionnaire included personal questions on age, gender, population group, education qualification, marital status, current position and years of experience in business. Other sections included company profile namely location of the business, ownership, construction industry development board (CIDB) grading, number of full time employees. Requirements of financial institutions e.g. collateral and tax number. It is worth noting that not all these variables were included in two models for credit accessibility i.e. to predict full credit they applied for or any credit at all. The dependent variable for full credit was informed by, whether the SMEs received full credit or part of the credit. On the other hand, the study also established whether the SMEs received the credit or did not receive credit. Statistical Package for Social Sciences (SPSS) version 22 was used to perform the binary logistic regression analysis on this dichotomous outcome.

Binary logistic regression models with dichotomous responses as dependent variables of Yes or No were modelled. Yes response was defined as having accessed credit and No accessed part of the credit. The second dependent variable defined "Yes" as accessed credit and "No" did not access credit. For analysis to be conducted, the responses of the dependent variables were coded as 1 and 0, for "Yes" and "No" respectively. The independent variables of the logistic regression model were coded. They conformed to the demographic and socio-economic characteristics of the SMEs: *gender* if male 1 and female 2; *age group,* 30 years and below 1, 31 years to 39 years 2, 40 years to 49 years 3 and 50 years and above 4; *current position*, director 1, owner 2, manager 3 and manager/owner 4; *ownership*, sole proprietorship 1, partnership 2, limited partnership 3, limited Liability company 4, corporation (for-profit) 5; *tax number* No, 0 and Yes, 1; *location of business,* city of Johannesburg Metropolitan Municipality 1, city of Tshwane Metropolitan Municipality 2, Ekurhuleni Metropolitan Municipality 4, West Rand District Municipality 4; *collateral* No, 0 and Yes, 1.

Logistic regression is recommended over linear regression when modeling dichotomous responses and allows the researcher to estimate probabilities of the response occurring [20]. The logistic regression equation takes the following form

ln (p/1-p) = β0 + β1x1 + β2x2 +… + βkxk…………………………………………………………………..(1)

Where p is the estimated probability of passing, and x1, x2, …, xk  are independent variables.

The estimated probability of the response occurring or passing (p) divided by the probability of it not occurring or not passing (1-p) is called the odds ratio. Maximum likelihood method is used to estimate the odds ratios of the model. Values of odds ratios higher than 1 indicate positive association between the variables, odds ratios equal to 1 indicate no association, while odds ratios lower than 1 indicate negative association between each independent variable and the dependent variable of the model.  Furthermore, in order for an independent variable to be a predicator of the dependent variable the p-value should be less than 0.05 at 95% confidence, which connotes its significance in the model. In achieving a fitting model the Hosmer-Lemeshow goodness of fit test should be significant i.e. the value should be greater than 0.05 [20].

The factors preventing SMEs from accessing credit were measured using Likert scale of 1 to 5. 1= Strongly disagree (SD), 2= Disagree (D), 3= Neutral (N), 4 = Agree (A), 5= Strongly agree (SA). The Likert-scale questions are discussed based on Mean Score comparison in interval scale. Hence, the difference between the upper and lower ends of the used scale is 4.0 since there are five points. Each range can be equated to 0.80 because the extent of the range is determined by a division between 4.00 and 5 (4/5). However, in the current study the intervals are as stated. The meaning of the intervals will change based on the questions asked by the researchers:

> 4.21 ≤ 5.00 Strongly agree; > 3.41 ≤ 4.20 Agree; > 2.61 ≤ 3.40 Neutral; > 1.81 ≤ 2.60 Disagree; > 1.00 ≤ 1.80 Strongly disagree.

## 4. Results and discussions

The results indicates that male respondents were the majority than female respondents, at 63% to 37% respectively. Majority i.e. 51% of the respondents were in the age group between 40-49 years old. 82% of the respondents occupied the position of owners. 98% of the SMEs are sole proprietors. Furthermore, majority i.e. 41% of the SMEs were located in the city of Johannesburg metropolitan.

**Table 1** indicates that the SMEs respondents strongly agreed that lack of collateral, lack of cashflow statement and owners equity were hindering SMEs from accessing credit from financial institutuions. The means were in the band of 4.21 to 5.00. Lack of collateral as a challenge was in line with the study of [6], [11], [13]. The sector of the bussiness, lengthy and vigorous procedure for credit application, high interest rates, location of the business were in the band of 3.61 to 4.20 suggetsing that the respondents agreed that they contributed to their difficulty of obtaining credit. Furthermore, the SMEs respondents disagreed that lack of appropriate eduaction and training, and lack of managerial ability were hindering them from accessing credit. These two constraints were in the band of 1.81 to 2.60.

**Table 1**: **Contraints in obtaining credit**

| Constraints of credit accessibility | Mean | Stdev. | Rank |
|---|---|---|---|
| Lack of collateral | 4.69 | 0.58 | 1 |
| Lack of cash flow statement | 4.51 | 0.98 | 2 |
| Owner's equity | 4.39 | 1.01 | 3 |
| Sector of the business | 4.14 | 1.21 | 4 |
| Lengthy & Vigorous procedure for credit application | 4.13 | 1.37 | 5 |
| High Interest rates | 3.81 | 1.51 | 6 |
| Location of the business | 3.76 | 1.27 | 7 |
| Lack of good reference on integrity | 3.03 | 1.66 | 8 |
| Lack of awareness of existing credit schemes | 2.97 | 1.71 | 9 |
| A general lack of experience and exposure on construction project | 2.75 | 1.73 | 10 |
| Lack of information on the cost obtaining such service | 2.72 | 1.74 | 11 |
| Lack of appropriate education & Training | 2.21 | 1.68 | 12 |
| Lack of managerial ability | 2.09 | 1.59 | 13 |

## Conclusions

The study elicited information from SMEs personnel who are conversant with the credit accessibility within their enterprise. The study found that SMEs are stifled from accessing credit because of lack of collateral/security, lack of

cash flow statement and owners' equity. However, despite the constraints of accessing credit, which could be an obstacle to credit accessibility, the results suggest that majority of SMEs received credit whether full credit or partial credit. However, despite the SMEs obtaining partial credit it can hinder their progress. It can be suggested that when construction SMEs receive part of the credit they might apply for credit in other financial institutions or request financial assistance from friends in order to cover for the deficit.

## Recommendations of the paper

Based on the conclusions, the study recommends the findings to different stakeholders, that is:

### Recommendations to government

The government needs to encourage construction SMEs to approach commercial financial institutions to apply for credit as majority of SMEs obtained credit from them. The notion that commercial financial institutions reject or deny SMEs credit should be argued with caution as this study indicates that majority of SMEs acquired their credit from commercial financial institutions. The government needs to inform financial institutions not to be too stringent with collateral (security), owners' equity and cash flow statement as these are the constraints impeding SMEs from credit accessibility.

### Recommendation to financial institutions

The financial institutions should be aware of this constraints construction SMEs encounter in accessing credit. Collateral (security), owners' equity and cash flow statement should not be mandatory requirements in order for SMEs to acquire credit. Other requirements should be suggested which will make it easy for SMEs to access credit.

### Recommendation to construction SMEs

SMEs should be informed that they should provide the age, and current position in the organization of the person applying for the credit. Furthermore, they should provide the tax number and the location of the business in order for them to obtain full credit they apply for. However, it is worth indicating that SMEs should also be aware of the requirements that the financial institutions will request them to submit as they apply for credit.

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