

Relationship between Determinants of Financial Assistance and Credit Accessibility of Small and Medium-Enterprises (SME's): A Case Study of SME's in Takoradi Metropolis in the Western Region of Ghana

Benjamin Blandful Cobbinah, Yuandong Cheng, Nalugoti Milly, Francis Atta Sarpong

School of Economics and Management, Anhui University of Science and Technology, Huainan, China
Email: bencobbah421@gmail.com, 3058259494@qq.com, millykay7@gmail.com, nanaipee@gmail.com

How to cite this paper: Cobbinah, B. B., Cheng, Y. D., Milly, N., & Sarpong, F. A. (2021). Relationship between Determinants of Financial Assistance and Credit Accessibility of Small and Medium-Enterprises (SME's): A Case Study of SME's in Takoradi Metropolis in the Western Region of Ghana. *Open Journal of Business and Management*, 9, 430-447.

<https://doi.org/10.4236/ojbm.2021.91023>

Received: December 7, 2020

Accepted: January 26, 2021

Published: January 29, 2021

Copyright © 2021 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

In Ghana and other countries' economies, small and medium scale enterprises (SME's) play a principal role that significantly impacts economic stability. SMEs contribute prominently to the economy by creating more noteworthy work openings, making higher creation volumes, growing conveys and introducing progression and business capacities. This study used a sample of 336 SMEs out of 500 SME's located in the Western Region (Takoradi Metropolis). These SMEs data were obtained using questionnaire in which its instrument was validated by experts in the field of finance and was administered to the respondents. Primary data were obtained to assess the determinants of financial assistance available to SME's in Ghana (Takoradi Metropolis). Strategies were used to obtain the outcome of the result, such as ANOVA (analysis of variance), regression analysis, and descriptive statistics to analyze the relationship between the determinants of financial assistance and SMEs' credit accessibility. It showed that firm's age, size, performance, and collateral security all have a positive impact that determines financial assistance to the credit accessibility of SMEs in Takoradi Metropolis. The research discovers enough information that confirms critical factors that push the credit accessibility available to SME's. It can be recommended that the availability of credit opportunities to SME's in the form of loans should be given a maximum consideration.

Keywords

Credit Accessibility, Small and Medium-Sized Enterprises (SMEs), Takoradi

1. Introduction

Globally, the effect of Small Medium Enterprises on the expansion of all-purpose national economies is in a significant-high state. In the general growth economies, small and medium enterprises are the central or core mechanism leading to economic growth and development. Per the research conducted in the less developed economies with freedman studies conducted in the UK, small-medium enterprises contribute to the highest number of listed organizations and outcomes in the substantial indulgence leading to economic growth and development. The Registrar Generals Department of Ghana campaigns that 92% of business registered are Small Scale Enterprises (SME's). Small Scale Medium Enterprises also contribute around 80% of employment in manufacturing, which contributes approximately 70% to the Gross Domestic Product in the country, and that it has a hand on the country's income, employment and the growth of the economy.

According to (Ayyagari et al., 2007), Small Medium Enterprises contribute a high percentage of manufacturing employment. SME's do not have an ultimate view of accessing financial support. The credit cost is not only viewed by SMEs as a setback that fights against large firms, but SME's are prone to dynamics leading to a more significant effect than huge businesses. Diverse authors have given this community or class of business various accounts. Certainly, SMEs have not been left out of the description that is generally associated with notions or ideas or hypotheses associated with many components. Among researchers, firms are defined by their size difference. Many people are seeking to use capital assets, while some are using labor and income skills. Some also characterize small and medium-sized companies in terms of their legality and production schedules. Small businesses are described in Ghana as worth up to \$100,000 in fixed assets while employing between 6 and 29 employees. On the other hand, medium-sized companies are firms with fixed assets valued up to \$1,000,000 and between 30 and 99 employees. These businesses give the economy considerable importance by involving the majority of the workforce, rising GDP, and assisting the economy that leads to economic growth.

Nevertheless, the critical position of small and medium-sized enterprises (SMEs) in the advancement of the economy, Ghana, and Small-Medium Sized business global, is faced by many barriers globally, which hinder entrepreneurial development. The lack of adequate training and education, the funding of small and medium-sized enterprises, and access to financial support (which is the subject of this study), in addition to poor management skills, is one of the challenges affecting the growth of small and medium-sized enterprises in the Western Region of Ghana. Poor management skills resulting from lack of proper suf-

efficient training and education, small and medium-sized business financing and financial support accessibility (which focuses on this study), stands out to be one of the growth barriers affecting small and medium scale enterprises in Takoradi. According to (Kessy & Temu, 2010), the importance of SMEs in economic development is well recognized. SMEs do not perform well in many countries, especially in developing countries. The lack of sufficient funds to support operations and expansion is one reason for poor results. Small and medium-sized enterprise (SME) funding has been a topic of limitless concern to both policymakers and investigators because of SMEs' effect on the world's private sector. On average, the percentage carried by small and medium enterprises is enormous. Fundamentally, financial assistance opportunities and credit cost not being explained by Small and Medium Enterprise tends to have more significant inhibitions as linked to the business of high in value. Also, concerning SMEs, these characteristics coerce them (SME's) extra regarding giant companies.

Concerning loan financing available to SME's, many SMEs obtain few bad loans while others do not get access to loans. There is an argument according to (Kessy & Temu, 2010; Kuzilwa, 2005) the absence of funding available to SMEs is a greater obstruction that tends to fight against the significant growth of SMEs. There has been regarding accepting the fund available to SMEs as vital for expansion and growth of SME's in Takoradi Metropolis and Ghana. The research outcome generates a full set of information on the influencing factors that lead to credit accessibility and how it affects small and medium enterprises in Takoradi Metropolis. The review found that components affect the SME's probability to solicit funds to achieve maximum growth and expansion in the Metropolis.

2. Literature Review

Bolton (1971) categorized business into two terms: features of quantity such as properties, jobs, turnover, and quality features such as organizational structure and inventions. World Bank (2013) sees business as a small-medium scale enterprise based on the following criteria or thresholds: asset, size, annual revenue, or the number of employees: World Bank sees Micro business as the type with an overall asset amount to 10,000 and has ten employees. Similarly, a total asset of \$3 million related to micro Enterprise with employees up to a minimum of 50 personnel; 300 employees, and a total asset worth \$15 million relating to medium-sized Enterprise as far as SME's criteria are concerned. The idea to select the best SME's is being led by numerous determinants or components. This includes the country's culture relating to business, the industry, the nation's population, etc. (Kushnir, 2010). Her study concluded that the absence of SME data is a big blow because many SMEs operate in the informal sector. Nkuah et al. (2013) also view that SMEs are owned by private individuals whose personnel number is small, tiny sales volume and small fixed assets.

Basing on the above, Small Medium Scale Enterprises had a category according to a comprehensive set of measurements and division. Talking of dimen-

sions, various metrics are used worldwide to distinguish between SME's, including several workers, total net assets, annual turnover, total net assets, the total number of staff (employees), and outlay (Kushnir, 2010). For instance, there was an explanation given by the European Union (EU) that medium Sized enterprises are the enterprises that bring in fewer than 250 personnel, with a participation rate per annum less than 250 individuals. Categorically, small enterprises belong to small businesses engaging 10 to 49 people with low sales in year \$13 million or below. The primary criteria used are the number of working populations due to gathering materials necessary for SME's in any nation.

Table 1 below offers a rundown of SMEs' proportional definitions worldwide, comprising the European Union (EU), the United States (US), and some developing BRICS economies, based on team member headcount. With Russia's probable exception, the BRICS's affiliates are all embryonic economies or recently technologically advanced countries that are separated, focusing on their rapid advancement of the economy, large capacity, and considerable effect on national matters (Schaper et al., 2010).

Now, critically analyzing the below **Table 1**, it can be said that there is no primary definition given to SME's globally as the table depicts the differences in SMEs due to different countries and their requirements to name for business categorization. The credit rationing theory was also the basis of this research. The Credit Rationing Theory is a theory of the financing gap suggested by Stiglitz and Weiss (1981), who maintained in their instigation that the primary explanation why SMEs had inhibited access to funding was the dynamics of the organization (a conflict of interest between the administration (management or agents) as well as the stockholders of the entity (owners) and information anomalies).

In developed and emerging countries, there is evidence that SMEs are the backbone of the national economy (Beck & Demircuc-Kunt, 2006). For example, SMEs dominate the industrial and commercial infrastructure in India and China

Table 1. Proportional characterizations of SMEs.

| Description | Micro-Enterprise Number of employees | Small-Enterprise | Medium-Enterprise |
|----------------------------------|---|------------------|-------------------|
| US Small business administration | 1 - 19 | 20 - 99 | 100 - 499 |
| European Union | 1 - 9 | 10 - 49 | 50 - 249 |
| Brazil | 1 - 9 | 10 - 49 | 50 - 99 |
| China | 1 - 299 | 300 | 300 - 3000 |
| Ghana | 1 - 5 | 6 - 29 | 30 - 99 |
| South Africa | 1 - 5 | 20 - 49 | 50 - 200 |

Source: Schaper et al. (2010).

(Ebrahim et al., 2011). SMEs also have advantages over large developed companies because they can respond much more quickly to business conditions (Abor & Quartey, 2010). As a result of their flat class levels, they are usually more resilient and can thus respond faster to changes in the external economic climate. Accordingly, the cycle time for new product production appears to be shorter for SMEs than for larger firms.

2.1. Firm's Age

Various researches have shown that, relative to new firms, older firms face little constraint in obtaining credit. Beck and Cull (2014), for example, since older businesses appear to have a better reputation, raising the likelihood of accessing credit (Osei-Assibey, 2014). This is owed to the lack of adequate details on young and emerging companies' financial results, making it difficult for financiers to sanction their demand for credit (Adomako-Ansah, 2012). Also, due to the lack of definitive track record, the knowledge prerequisite for borrowers at the time of providing financial assistance may be limited for new companies as a result of bookkeeping absence, making the obligation charges related to loaning to new companies moderately higher (Pandula, 2011). Likewise, due to the significant reason that they have not acquired enough fixed assets, younger as well as new businesses or companies are less likely to satisfy the banks' protection demands (Pandula, 2011; Adomako-Ansah, 2012).

2.2. Firm's Size

Pandula (2011) and Kumah (2011) stated that a further requirement for the evaluation by financial institutions of a company's creditworthiness is its scale. Pandula (2011) concluded that, relative to huge entities, small entities are more credit inhibited with their incapability to deliver financial data required for selection by the FIs. In certain occurrences, they do not have checked financial reports or accounts (statements). To go on, small firms do not have the capacity to present collateral security for credit access that have a negative impact on the performance of the business in terms of growth and expansion.

2.3. Firm's Performance

SME output is one of the requirements or conditions for evaluating or assessing a company's financial health. This happens because businesses that perform well are more likely to be able to meet their obligations. For the previous three years, Pandula (2011) uses the cumulative twelve-monthly revenue growth calculated by company results. It offers an improved indicator of funding requirements compared to that of a single year only. Consequently, underprivileged (low) business success is one of several vital reasons companies or companies cannot have access to credit. Amid declining or diminishing and stationary (stagnant) companies, Baah-Nuakoh (2003) finds that credit is the most severe significant restriction.

2.4. Collateral Security

Collateral security by giving or lending a contract, an asset with which a borrower is required to deposit with, or pledge to, a lender as a condition of obtaining a loan, which can be sold if the loan is not repaid. The assurance or warranty acts as insurance or against the default of a borrower for a lender, hence this leads to the inability of the borrower to default the loan and the interest that was agreed upon (due to insolvency or another event). In that situation, the lender will eventually become the rightful owner of the property as a result of the borrower's inability to pay. [Wanjiru \(2000\)](#), in his study, brought that, one of the major influencing factors of SME's credit accessibility in Takoradi Metropolis is collateral security. This is because the mainstream respondents considered that the conditions of credit eligibility in terms of collateral were unrealistic.

3. Methodology

This section includes the processes or procedures, methods or approaches, instruments and techniques used in the analysis to evaluate the main contributing factors of credit accessibility acquired by Takoradi Metropolis Small and Medium Scale Enterprises (SMEs). To generate or get essential or relevant information from it, the processing and analysis of data in a reasonable or structured and well-organized or coordinated approach are referred to as research design. Sample size determination, study model, questionnaire design and calculation, and model specification are included in the subsections.

3.1. Research Design

For our analysis, descriptive research designs or schemes were used. To obtain a detailed or reliable reaction and outcomes, a descriptive testing approach or methodology has been adopted. According to ([Zikmund et al., 2003](#)), a statistical, mathematical, or computational interpretation of the data that was collected or collected from descriptive research is used to apply for the quantitative research design or methodology.

3.2. Determining Population and Sample Size

The target population of the study encompasses 500 SME's in the Takoradi Metropolis. With regards to the large number of SMEs in the Western Region (Takoradi Metropolis) and since the population of staff high, probability sampling was used to obtain the data. For a participant to be considered a probability sample, they must be selected using a random selection. A simple random sampling, precisely the lottery method, was used to select 336 SME's in the Takoradi Metropolis. The sample size was determined using the [Bartlett, Kotrlik, and Higgins \(2001\)](#) sample size determination table, which indicates that with a population size of 500, a minimum sample size of 147 is appropriate for the study. The researchers revised the sample size to 336 SME's for generalization purposes.

3.3. Data Collection Instrument

A questionnaire influenced by an extensive review of the literature was adopted for the study. With regards to the validation of the instruments, four experts in the field of finance, entrepreneurship and innovation from University of Ghana-Legon, Anhui University of Science and Technology China and University of Cape Coast validated the instrument. The questionnaire's reliability was measured using the test-retest method, which showed a good reliability coefficient of $r = 0.85$ using Pearson product moment correlation. This shows that the instrument's internal consistency is deemed fit for the study. Section A of the instrument collected data on the biographic information of the respondent. Section B also collected data on the influencing factors of SME's (length, size, performance, collateral security) of a firm's operation. Section C collected information on the credit accessibility of SME's.

This particular study seeks to describe or clarify the comfort levels of various financing small-scale enterprises in Takoradi Metropolis or financial assistance. For scrutinizing ratio data, there are numerous instruments and techniques suitable. In this analysis, we used SPSS version 25 software to evaluate the questionnaire. For section A of the questionnaire, descriptive statistics were determined for computation and inferential statistics (regression) for Sections B and C to establish the relationship between SMEs' influencing factors and credit accessibility in the Takoradi Metropolis.

3.4. Conceptual Model and Hypothesis

This study sought to investigate the relationship that exists between the determinants of financial assistance and SME credit accessibility. Based on a widespread review of related literature on SME's in the archive, the Model that guides the study was based on the study's research hypothesis. The Model regresses financial assistance's influencing factors (firm's age, size, performance, and collateral security) of SME's credit accessibility in the Takoradi Metropolis. This has been demonstrated in **Figure 1**.

Research Hypothesis

It is hypothesized that firm's age, firms size, firm's performance and firm's collateral security lay a foundation for SME's in Takoradi Metropolis to access credit which tends to have a greater impact on the growth and development of the business. Based on the study, we state our hypothesis as follows:

H₁: Firm's age significantly affect SME's credit accessibility in the Takoradi Metropolis.

H₂: The size of SME's has a positive influence on their credit accessibility in the Takoradi metropolis.

H₃: Firm's performance over a while significantly affects SME's credit accessibility in the Takoradi Metropolis.

H₄: The Collateral security required from SME's influence their credit accessibility in the Takoradi Metropolis.

4. Data Analysis and Discussion

4.1. Statistics of Demographic Information of Respondents

Table 2 highlights respondents' background information covering their gender, age, business category, and academic qualification. This has been clearly illustrated below.

In **Table 2**, gender statistics result discovered that males contributed the highest number of respondents, which is 240 out of 336, representing (71.4%). In comparison, the remaining 96 were females, portraying (28.6%) of the total respondents. This confirms to our study that males dominate in Takoradi Metropolis as far as SMEs are concerned. Information in **Table 2** revealed that respondents who fall below the age of 20 were the second-highest 84 (25.0%) participating in the study as registered SME's in the Takoradi Metropolis. Respondents between the ages 21 - 25 years dominated, with 90 respondents representing 26.8% of the total number of businessmen and women who participated in the study. Respondents with ages 26 - 30 and 31 and above respectively consisted of 82 (24.4%) 80 (23.8%). The age group domination is found to be in the private informal segment as part of the active working-class community. Such people are often associated with insufficient credit accessibility. 145 (43.2 percent) retailers occupy the documented Small Scale Enterprises (SME) market, 130 (38.7 percent) and 61 (18.1 percent) respectively, as opposed to producers and services. The presented evidence depicts that the most dominant businesses in SME's market are the retailers in the Third World economies. As a result, many credit and finance institutions directly direct their credit to retail entrepreneurs and least credit advances to producers and other types of enterprises.

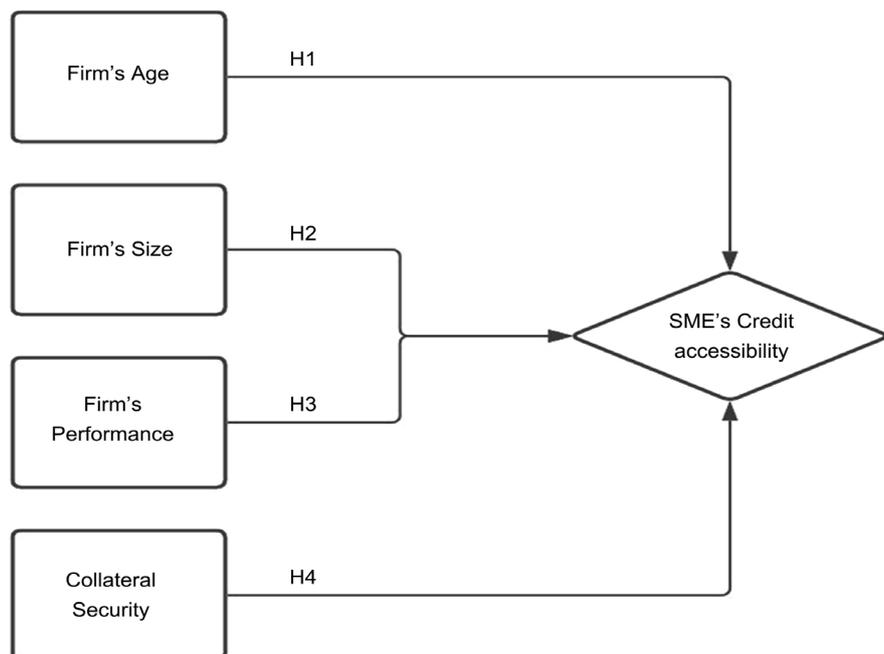


Figure 1. Research model.

Table 2. Demographic characteristics of respondents.

| Variable | Sub-scale | Frequency | (Percentage) |
|------------------------|---------------|-----------|--------------|
| Gender | Male | 240 | 71.4 |
| | Female | 96 | 28.6 |
| Age (in years) | Below 20 | 84 | 25.0 |
| | 21 - 25 | 90 | 26.8 |
| | 26 - 30 | 82 | 24.4 |
| | 31 and above | 80 | 23.8 |
| Business Category | Manufacturing | 130 | 38.7 |
| | Retailing | 145 | 43.2 |
| | Service | 61 | 18.1 |
| Academic Qualification | Non-formal | 96 | 28.6 |
| | Basic | 82 | 24.4 |
| | Secondary | 80 | 23.8 |
| | Tertiary | 78 | 23.2 |

Source: Field survey (2020).

Consequently, this shows that the company group also has a significant impact on access to financial assistance (credit) for SMEs in the Western Region of Ghana documented Small Scale Enterprises (SME) market, 130 (38.7 percent) and 61 (18.1 percent respectively, as opposed to producers and services. The available evidence shows that retail business dominates in most Third World economies. As a result, many credit and finance institutions directly direct their credit to retail entrepreneurs and least credit advances to producers and other types of enterprises. Consequently, this shows that the company group also has a significant impact on credit accessibility available (credit) for SMEs in the Western Region of Ghana.

The respondent's academic or technical credentials showed that most 121 respondents (36.0%) are uneducated. Out of the total respondents, 72 (21.5%) had completed primary education and were currently engaged in SME's activities in the Takoradi Metropolis. A significant number, 73 representing (21.7%) of the respondents, had completed tertiary education and were enrolled in SME's business life in Takoradi. The least dominated category of respondents' academic qualification was those with a secondary level of education (SSCE/WASSCE) 70, representing (20.8%) of the total respondents. This means that much of the region's registered small-scale businesses are being managed and operated by illiterates in the Western Region of Ghana is high as far as SMEs are concerned.

4.2. Regression Analysis

4.2.1. Empirical Model

Under this section, the researcher focused on the numerous variables that influence the accessibility of credit to SME's in the Takoradi Metropolis. Analysis from multiple linear regression was conducted that investigated if sufficient evidence was obtained to assist the researcher in determining the existence of direct correlation or linear Model between the dependent variable (Y), credit accessibility and the independent variables (S), X1, X2, ..., XP-1 (Firm's age, size, performance, and collateral security). The mentioned variables in the research goals were evaluated for the linear relationship or bond in this study with the aid of multiple regressions.

Mathematically, the linear Model is stated below as;

$$CA = \beta_0 + \beta_1FA + \beta_2FS + \beta_3FP + \beta_4CS + E$$

where;

CA = Credit Accessibility.

FA = Firm's Age.

FS = Firm's Size.

FP = Firm's Performance.

CS = Collateral Security.

In this, the unspecified coefficient that is, β_0 , β_1 , β_2 , β_3 , and β_4 in which their outcome was determined or estimated by regression investigation from SPSS. The error term, which E talks on the chance, has a value of zero as a variance on positive 1.

Hypothesis One: Regression Analysis between Credit Accessibility and Firm's Age

The relationship between the dependent variable and independent variable access to credit and business age was the analysis by linear regression analysis models. In addition to the correlation coefficient (R), the determination coefficient shows the extent of the relationship between the age of the company and credit accessibility by SME's in Takoradi Metropolis. **Table 3**, the value of R = 0.12, shows a linear or positive correlation between SME's age and credit accessibility. The R square from the Table also states that the power of prediction of the independent variable is 12%, which means that the Model $Y = \beta_0 + \beta_3X_3 + E$, where Y is access to credit and X3 is the age of SME's, represent or determines about 12% of the changes in access to credit. Basing on that, it is said that a change in the independent variable will cause a variation in the dependent variable. This means that the duration of operation used by small-medium enterprises determines their access to credit. There is a belief by FIs that their chance of loan default is the lowest for SME's in service for the long term. The analysis of variance (ANOVA) result, which depicts that the age of SME's has a significant effect on credit accessibility, is listed in **Table 4** below. The *p*-value is less than 5% of the significance level. This means that the Model was influential in the li-

near regression model $CA = 12.569 + 0.123FA + E$. As shown in **Table 5**, the model coefficient is significant. Given the positive coefficients of both the constant and the independent variable, their access to credit is positively affected by the business's age or operations. In **Table 3**, **Table 4**, and **Table 5**, this was shown.

Table 3. Credit accessibility and the age of the firm's model summary.

| Model | R | R Square | Adjusted R Square | Estimated Std. Error |
|-------|-------|----------|-------------------|----------------------|
| 1 | 0.111 | 0.12 | 0.09 | 1.10549 |

Source: Field survey, 2020.

Table 4. Credit accessibility and the age of the firm's ANOVA model.

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|------|-------|
| Regression | 5.138 | 1 | 5.138 | 4204 | 0.041 |
| 1 Residual | 408.184 | 334 | 1.222 | | |
| Total | 413.321 | 335 | | | |

Source: Field survey, 2020.

Table 5. Credit accessibility and the age of the firm's model coefficient.

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|--|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | Beta | | |
| Constant | 12.569 | 0.127 | | 20.189 | 0.000 |
| 1 age of the firm and access to credit | 0.123 | 0.060 | 0.111 | 2.050 | 0.041 |

Source: Field survey, 2020.

Hypothesis Two: Regression Analysis between Credit Accessibility and Firm's Size

The regression model's outcome summary is shown in **Table 6**; both 0.49 and 0.46 are R and R² values. The value of R = 0.049 indicates the favorable direct relationship between SMEs' size and their access to credit. The R² shows that the predictive value of independent variables is 49%, which means that the $CA = \beta_0 + \beta_4FS + EE$ Model shows about 49% of the credit access variance. A change in the independent variable (credit access) leads to a change in the dependent variable (business size). The ANOVA test outcome, which indicates that the size of small and medium enterprises has a significant or positive impact on credit access, is also proved in **Table 7** since the value of P is less than 5% of the significance level. A linear regression model $CA = 3.159 + 0.505FS + E$ illustrated in **Tables 6-8** means that it was significant.

Table 6. Credit accessibility and the size of the firm's model summary.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.221 | 0.49 | 0.46 | 1.08495 |

Source: Field survey, 2020.

Table 7. Credit accessibility and the size of the firm's model ANOVA.

| Model | Sum of Squares | Df | Mean Square | F | Sig. | |
|-------|----------------|---------|-------------|--------|--------|-------|
| 1 | Regression | 20.164 | 1 | 20.164 | 17.139 | 0.000 |
| | Residual | 393.158 | 334 | 1.177 | | |
| | Total | 413.321 | 335 | | | |

Source: Field survey, 2020.

Table 8. Credit accessibility and the size of the firm's model coefficient.

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | |
|-------|--------------------------------|------------|---------------------------|-------|--------|-------|
| | B | Std. Error | Beta | | | |
| 2 | Constant | 3.159 | 0.207 | | 15.285 | 0.000 |
| | firm size and access to credit | 0.505 | 0.122 | 0.221 | 4.139 | 0.000 |

Source: Field survey, 2020.

Hypothesis Three: Regression Analysis between Credit Accessibility and Firm's Performance

The regression model description is shown in **Table 9** and R, and R-squared values are 0.45 and 0.45. The value 0.45 which is the R value reflects a positive linear association between the outputs of SME's and access to credit. The table notes that the independent variable's accurate prediction is 45%, stating that the $CA = \beta_0 + \beta_2 FP + E$ Model. In contrast, access to credit (CA) and SME's (FP) performance explains approximately 45% of the difference or changes in access to credit. This implies that the result of variation explained, a percentage rise in the dependent variable occurs. As per the objectives set out in this report, the model summary depicts that the performance of SME's affects access to credit because our analysis shows that higher-performing SME's have more accessibility to credit than low-performing businesses over time. The dependent variable (access to credit) and the dependent variable have progressive correspondence. The result from the ANOVA test in the table indicates that the performance of SME's has a significant effect on credit accessibility, given that the value of p is less than 5% of the level of significance and further stated that the linear regression model $CA = 1.767 + 0.275FP + E$ was very significant. **Table 9**, **Table 10** and **Table 11** depicted there is a positive association between the dependent variable (credit accessibility) and independent variable (firm's performance).

Table 9. Model summary of regression of firm's performance and credit accessibility.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.212 | 0.45 | 0.42 | 1.08718 |

Source: Field survey, 2020.

Table 10. Credit accessibility and firm's performance model ANOVA.

| Model | Sum of Squares | Df | Mean Square | F | Sig. | |
|-------|----------------|---------|-------------|--------|--------|-------|
| 1 | Regression | 18.546 | 1 | 18.546 | 15.691 | 0.000 |
| | Residual | 394.775 | 334 | 1.182 | | |
| | Total | 413.321 | 335 | | | |

Source: Field survey, 2020.

Table 11. Credit accessibility and firm's performance model coefficient.

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | |
|-------|--------------------------------|------------|---------------------------|-------|--------|-------|
| | B | Std. Error | Beta | | | |
| | (Constant) | 1.767 | 0.156 | | 11.311 | 0.000 |
| 1 | firm size and access to credit | 0.275 | 0.069' | 0.212 | 3.961 | 0.000 |

Source: Field survey, 2020.

Hypothesis Four: Regression Analysis between Credit Accessibility and Collateral Security

This section of the study regressed collateral security required by SME's in applying for funds on their credit accessibility. From **Table 12**, the regression model outcome summary is displayed. Separately, the R and R² values are 0.59 and 0.56, respectively. This means that a positive linear correlation exists between the criteria of SME's access to credit and the collateral protection necessary to request any financial aid to their businesses. The variations are induced by changes in the independent variable (collateral security) in the dependent variable (access to credit). Taking from the hypothesis of our study, it is true that the financial assistance influences the credit access available to SME's and firms' who fail to bring on board coherent securities find themselves not getting financial help to improve and expand their business for maximum growth. The results of ANOVA test from **Table 13** defines collateral protection or substantial effect on SMEs' credit accessibility, as the real *P*-value is less than 5% of the significant amount. Meaning that the Model is essential; that is, we fail to reject the null hypothesis. **Table 14** displays coefficient of the model between the dependent variable (credit accessibility) and the independent variable (collateral security) as the total security percentage. There is a suggestion from the table that the model coefficient is complimentary, and there is a relation between two variables. At a 5% level of confidence, the coefficient is significant.

Table 12. Model summary of regression of collateral security and credit accessibility.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.243 | 0.59 | 0.56 | 1.07899 |

Source: Field survey, 2020.

Table 13. Credit accessibility and collateral security model ANOVA.

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------|
| Regression | 24.474 | 1 | 24.474 | 21.022 | 0.000 |
| 1 Residual | 388.848 | 334 | 1.164 | | |
| Total | 413.321 | 335 | | | |

Source: Field survey, 2020.

Table 14. Access to credit and collateral security model coefficient.

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|----------------------------------|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | Beta | | |
| Constant | 1.752 | 0.141 | | 12.431 | 0.000 |
| 1 firm size and access to credit | 0.219 | 0.048 | 0.243 | 4.585 | 0.000 |

Source: Field survey, 2020.

4.2.2. Overall Regression Analysis

Under this study, it is intended to achieve the broad study aim of identifying the factors that fight against small-medium enterprises' credit accessibility. The grade of connection between the independent variables as well as credit accessibility (dependent variable) of SMEs in Takoradi Metropolis was seen using the coefficient of determination (R^2) and the correlation coefficient (R). A clear positive association between credit accessibility, age, scale, performance, and collateral protection of SMEs is shown at R of 0.837, as indicated in **Table 15**. Also, after solving for independent variables, the model established, there is a high value in the R squared that was obtained. Changes in independent variables clarify approximately 82.7 percent of changes in access to credit after monitoring the degrees of freedoms (number of independent variables). The P -value = 0.000 in **Table 16** is less than 5 percent. This shows that in forecasting and decision making, the general model is important and can be used. This implies that the business place, type of ownership, age of the company and size of the company all have a huge impact on SMEs' access to credit in Takoradi Metropolis. Also from **Table 17**, the overall model overview confirms this study's objective that as SMEs within the Takoradi Metropolis decide on access to credit, there is a positive relationship between the independent variables and the dependent variable.

The study's findings confirm the research findings (Beck & Cull, 2014; Osei-Assibey, 2014; Pandula, 2011; Kumah, 2011; Wanjiru, 2000). These studies' findings affirmed that SME's age, size, performance, and collateral security influence their credit accessibility. The studies discovered that older firms encounter fewer limitations in accessing credit than fresher firms. That points out that small entities are more credit inhibited than huge entities in securing and getting access to credit facilities to support their business. The studies aforementioned affirmed that SME's could not get admitted to credit score due to cynical commercial enterprise overall performance. Therefore, SME's with good performance have access to credit facilities over the years than their counterparts

Table 15. Model summary of overall regression analysis.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.371 | 0.837 | 0.827 | 1.03790 |

Source: Field survey, 2020.

Table 16. Overall regression analysis model ANOVA.

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------|
| Regression | 56.759 | 4 | 14.190 | 13.172 | 0.000 |
| 1 Residual | 356.563 | 331 | 1.077 | | |
| Total | 413.321 | 335 | | | |

Source: Field survey, 2020.

Table 17. Overall regression analysis model coefficient.

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|--|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | Beta | | |
| Constant | 2.725 | 0.286 | | 9.537 | 0.000 |
| Firm' age and access to credit | 0.168 | 0.052 | 0.186 | 3.227 | 0.001 |
| 1 Firm' Size and access to credit | -0.525 | 0.118 | -0.229 | -4.455 | 0.000 |
| Firm's Performance and access to credit | -0.162 | 0.057 | -0.147 | -2.844 | 0.005 |
| Firms collateral security and access to credit | 0.153 | 0.075 | 0.118 | 2.045 | 0.042 |

Source: Field survey, 2020.

with poor performance. Again, collateral security has a positive relation with SME's accessibility. All the variables mentioned above (age, size, performance, and collateral security) significantly influence SME's credit accessibility in Takoradi Metropolis.

5. Conclusion and Recommendations

5.1. Conclusion

The following conclusions can be drawn from our findings: Initially, all that we've gathered or recognized is that retail, service, and manufacturing initiatives are the main or primary monetary operation in the Takoradi Metropolis among the identified or registered small-scale undertakings, but there are also other small-scale economic undertakings on the other side. Access to finance has a lot of reliable economic impact or impact on small-scale enterprises' survival. For example, it functions as opening capital and resources to numerous entrepreneurs in Takoradi metropolis for business expansion or growth. The listed majority of small-scale enterprises (SME's) are pleased or happy with the financial institutions' access to credit. Nonetheless, it has been noted or established that a few hitches or complications are linked to the procedures and strategies involved in obtaining credit, such as collateral criteria, bureaucratic processes, etc. Based on the findings, it was revealed that the heights (level of education, business place, collateral, the form of ownership, age of the company, as well as the size of the company, were all regarded in Takoradi Metropolis as the main factors or determinants of access to credit by small-scale businesses.

5.2. Recommendations and Practical Implications of the Study

Credit accessibility is regarded as necessary, to be precise, for the growth and survival of small businesses in Ghana and Takoradi Metropolis. We will make the following recommendations, based on our results, to the NGOs, policymakers, and the government. First, we suggest that financial organizations attend public education in the form of public press, seminars, conferences, meetings, and awareness campaigns to refresh or educate small-scale business machinists on the methods, needs, and techniques associated with the acquisition or the acquisition of credits to increase their request for credit and abandon the negative mentality. Second, priority should be given to developing credit services in the way of lending to businesspersons of small-scale businesses to involve in economic enterprises. The government and the private sectors should put this in motion, creating a promising environment or establishing business that will get access to credit from financial institutions without the stress of collateral security requirement from Nongovernmental organizations (NGOs) and the Ministry of Economic Affairs and Finance. Besides, the National Board of Small Scale Industries (NBSSI) and Microfinance and Small Scale Centers (MASLOC) must disperse their weapons to meet additional small-scale enterprises and improve their delegation or collaboration schemes to ease the convenience of credit.

Moreover, credit organizations should conduct comprehensive studies and changes in the direction of expanding their lending goods. This involves improving the terms of the loan to suit the cash flow range of borrowers, reasonable interest level, and acceptable loan volume, in accumulation to the cautious costs paid for handling of loans. Undoubtedly, this would help small-scale businesspersons fulfill their reimbursement of loans and also lessen the degree of default to support the Takoradi Metropolis credit organizations' maneuvers.

5.3. Limitations

Methodological limitations or shortcomings apply to or are correlated with the non-availability or nonexistence of a database or database containing accurate SME national and local information. To overcome or bypass this barrier or obstacle, reliance was placed on membership registers obtained or collected from SME affiliated organizations and the Metropolis Assembly database.

Conflict of Interest

The authors do not mention any conflicts of interest in the publication of this article.

References

- Abor, J., & Quartey, P. (2010). Issues in SME Development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39, 215-228.
- Adomako-Ansah, F. K. (2012). *Determinants of Small and Medium Enterprise (SME) Financing by Financial Institutions in Ghana*. Doctoral Dissertation.
- Ayyagari, M., Beck, T., & Demirguc-Kunt, A. (2007). Small and Medium Enterprises across the Globe. *Small Business Economics*, 29, 415-434. <https://doi.org/10.1007/s11187-006-9002-5>
- Baah-Nuakoh, A. (2003). *Studies on the Ghanaian Economy: Environment, Informal Sector, and Labour Markets* (Vol. 2). Woeli Pub Serv.
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal*, 19, 43-50. <https://doi.org/10.5032/jae.2002.03001>
- Beck, T., & Cull, R. (2014). SME Finance in Africa. *Journal of African Economies*, 23, 583-613. <https://doi.org/10.1093/jae/eju016>
- Beck, T., & Demirguc-Kunt, A. (2006). Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint. *Journal of Banking & Finance*, 30, 2931-2943. <https://doi.org/10.1016/j.jbankfin.2006.05.009>
- Bolton, J. E. (1971). *Report of the Committee of Inquiry on Small Firms*. London: HMSO.
- Ebrahim, N. A., Rashid, S. H. A., Ahmed, S., & Taha, Z. (2011). *The Effectiveness of Virtual R&D Teams in SMEs: Experiences of Malaysian SMEs*.
- Kessy, S., & Temu, S. S. (2010). The Impact of Training on Performance of Micro and Small Enterprises Served by Microfinance Institutions in Tanzania. *Research Journal of Business Management*, 4, 103-111. <https://doi.org/10.3923/rjbm.2010.103.111>
- Kumah, R. (2011). *Determinants of Access to Bank Credit in Ghana: The Case of Small*

- and Medium-Sized Enterprises in the Accra Metropolis*. Unpublished Thesis (MBA), Kumasi: Kwame Nkrumah University of Science and Technology.
- Kushnir, K. (2010). *A Universal Definition of Small Enterprise: A Procrustean Bed for SMEs?*
<http://blogs.worldbank.org/psd/a-universal-definition-of-small-enterprise-a-procrustean-bed-for-smes>
- Kuzilwa, J. (2005). The Role of Credit for Small Business Success. *Journal of Entrepreneurship*, 14, 131-161. <https://doi.org/10.1177/097135570501400204>
- Nkuah, J. K., Tanyeh, J. P., & Gaeten, K. (2013). Financing Small and Medium Enterprises (SMEs) in Ghana: Challenges and Determinants in Accessing Bank Credit. *International Journal of Research in Social Sciences*, 2, 12-25.
- Osei-Assibey, E. (2014). The Rural Financial System in Ghana: What Determines Access and Sources of Finance for Rural Non-Farm Enterprises? In *Readings on Key Economic Issues in Ghana. Social Science Series, 4*. Legon: Department of Economics, University of Ghana.
- Pandula, G. (2011). An Empirical Investigation of Small and Medium Enterprises' Access to Bank Finance: The Case of an Emerging Economy. *Proceedings of ASBBS Annual Conference*, Vol. 18, 18.
- Schaper, M., Volery, T., Weber, P., & Lewis, K. (2010). *Entrepreneurship and Small Business* (3rd Asia-Pacific ed.). Hoboken, NJ: John Wiley & Sons.
- Stiglitz, J., & Weiss, A. (1981). Credit Rationing in Market with Imperfect Information. *American Economic Review*, 71, 912-927.
- Wanjiru, R. (2000). *Factors That Influence Productivity of Credit Officers in Microfinance: Unpublished MBA Project*. Nairobi: University of Nairobi.
- World Bank (2013). *Global Financial Development Report 2013: Rethinking the Role of the State in Finance*. Washington DC: World Bank.
<https://doi.org/10.1596/9780821399859>
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2003). Research Methods. *Health Economics Research Method*, 2.