

Determinants of Small and Medium Scale Enterprise (SMEs) Access to Finance in Guji Zone

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Abstract: One problem that challenges SMEs is generating noble business idea but accessing the required finance to transform such ideas into practicality is another. Hence, this study examines empirically the factors which influence Access to finance for SMEs in Guji Zone selected Woredas, using firm-level data with the aim of identifying what determines internally access to finance of SMEs? And to understand which of the capital structure theories are appealing to them? To do this, the study identified seven firm specific variables from the literature to see their impact on the access of finance of the SMEs. A sample of 74SMEs were taken from the sample frame of 286 registered SMEs by using simple random sampling. The study used six years panel data. And the collected data were analyzed using multiple regressions (OLS) method. The regression result shows that, all the seven variables were statistically significant at 1% significant level. Out of the seven variables four variables such as; tangibility, age, growth and size are a positive relation with access to finance. On the other hand, the study found a negative relationship between the three variables i.e. Risk, location and profit ability with access to finance. Thus, to mitigate risk associated with providing credit to SMEs, this study suggest that, government intervention in the form of credit guarantee schemes may be an effective step towards addressing access to finance challenges facing SMEs.

Keywords: Access to finance, Determinants of Access to finance, and SMEs financing.

Introductions

Small and Medium sized enterprises (SMEs) have usually been perceived as the dynamic force for sustained economic growth and job creation in developing countries. They play multifaceted role such as boosting competition, innovation, as well as development of human capital and creation of a financial system. FreduNega and Edris Hussein (2016) The Growth Transformation Plan (GTP), (2014/15) prepared by the Government of Ethiopia, identified micro and small enterprises (MSEs) development as the key industrial policy direction for creating employment opportunities in Ethiopia. In particular, MSEs are expected to contribute greatly towards the GTP targets through the creation of more than 3 million jobs over the 5-years reference period. FeMSEDA

(2015) However, as indicated by various studies, Access to finance had been singled out as one of the major challenge impeding the survival and growth of start-up SMEs in many countries and the ability of SMEs to grow depend highly on their potential to invest in restructuring and innovation. All these investments require capital and therefore access to finance is a priority issue for developing and supporting the SME sector as an engine for employment creation, poverty alleviation and socio-economic stability at large. In the World Bank's report published in 2008 it is indicated that improving access and building inclusive financial system is goal that is relevant to economies, at all level of development. World Bank (2008) But as per the researcher's perception the challenge is greater than ensuring that as many businesses or firm or individual as

possible access to basic financial service. The challenge of access to finance in developing countries like Ethiopia includes where, who, when and under what condition that business are accessing credit. This means on the other hand law of the land, the policies and procedures of the institution providing credit service matter.

According to DeresseMersha and ZerihunAyenew (2017) Ethiopian SMEs are at early stage of development and face various constraints. One of the most crucial problems is financial constraint for start-up and operational activities. Likewise, based on the report of NBE (2015), in Ethiopia the funding portion given to this sector is only 1% of the total fund provided as loan. Compared with other country like Kenya and Mozambique it is very low which shows access to finance shouldn't addressed to all SMEs since the portion given only serve limited SMEs. (NBE, 2015/16) Furthermore, Osano, et al. (2016), also found that, most SMEs are denied and discriminated by the lenders in provision of financing because of high risk and for not having adequate resources to provide as collateral.

Beside world bank (2015) findings from both demand-side and supply-side surveys clearly indicate the existence of a missing middle phenomenon in Ethiopia whereby small enterprises are more credit constrained than large enterprises. In particular, the demand-side analysis shows that SMEs in Ethiopia perform much worse than large firms across a host of finance indicators. SMEs are much more likely to be rejected for loans, and less likely to have a loan, line of credit, or overdraft facility. These firms are also more likely to avoid loan applications all together due to high collateral requirements. Therefore this study was conducted to examine determinants of access to finance for SMEs in Guji zone.

Conducting a research on the topic "Access to finance for small business enterprise" is very important because; SMEs are described as efficient productive job creator, the seed of big businesses and the fuel of national economic engine as well as act as catalysts in the economic development of the developed and developing

countries (Abor&Quartey, 2010). Developing countries like Ethiopia that require sustained economic growth in their economies must pay attention to the SME sector and harness the great potential to generate employment, improved local technology, output diversification, developed indigenous entrepreneurship and forward integration with large-scale industries that can be provided by the sector. As indicated by Bartholdy and Mateus (2008) the role of small scale businesses can be as instruments of employment and income generation, human development and poverty alleviation, export promotion, import substitution, stimulation of private ownership, competition and entrepreneurship and hence the driving forces behind the growth of a vibrant industrial market economy. So that SMEs has generated considerable interest among the policymakers, academics, and the international donor agencies in recent times. Despite these contributions of SMEs, their major barriers to growth and development appear to be shortage of finance. Woldieet al. (2018), points out that there are more rejections than approvals of finance due to the lack of collateral, high interest rates and the inability of SMEs to develop attractive and bankable projects. Thus, adequate access to financing is critical to enable SMEs to contribute to the economic development of the nation. However, there appears to be limited evidence that confirms the contribution of research in the area of access to finance for SMEs in our country's context. Therefore, it is the motivation of this study to fill this gap by reviewing the major determinants that affects SMES in accessing finance.

Research Objectives and Hypothesis

Objectives

The main purpose of this study is to examine the factors which influence Access to finance for small and medium enterprise (SME) in Guji zone; and then testing the result in line with major capital structure theories. Specifically, the study would be designed:

- To assess the impact of firm specific factors i.e. growth opportunity, profitability, risk, size

of the company, age of the firm, locations of the firm as well as the asset structure (tangibility) on the access to debt finance of SMEs.

- To identify which capital structure theory can more explain the variations on financing decisions SMEs.

Hypothesis

Based on the objective of the study the following hypotheses were developed:

Hypothesis 1: There is a relationship between access to debt finance and tangibility.

Hypotheses 2: There is a relationship between access to debt finance and size.

Hypothesis 3: There is a relationship between access to debt finance and profitability.

Hypothesis 4: There is a relationship between access to debt finance and earnings volatility.

Hypothesis 5: There is a relationship between access to debt finance and growth.

Hypothesis 6: There is a relationship between access to debt finance and location of the firm.

Hypothesis 7: There is a relationship between access to debt finance and age.

Empirical Review

According to DestaZelalem and MebratWubante (2019), the dynamic role of MSMEs in developing countries insures them as engines through which the growth objectives of developing countries can be achieved. However many problems encounter MSMEs and as a result, many firms perform dismally and fail to grow. Similarly, Sasan B. et al. (2020) stated that, SMEs claim an important chunk of economic activity in most OECD economies, making up the vast majority of firms and accounting for a sizeable amount of employment and value added. However, they have lower productivity, and this is at least partly due to financial constraints. Park et al. (2008) also argued that SMEs face financing gaps probably because of a combination of reasons originating from both the supply and demand sides. The supply side refers to providers of finance (financial institutions and investors),

while the demand side is composed of SMEs who require financing from financial institutions and other providers of finance. The financing gap for SMEs is most prominent in capital market financing. Most countries, including the developed ones, have problems in SME financing through capital markets Park et al., (2008).

With regard to determinants of access to finance for SMEs a number of studies were conducted. For instance; a study conducted by FreduNega and Edris H. (2016) on determinants of SMEs' access to finance from formal financial institutions using logit model. Their Results indicate that banks and MFIs engagement in financing SMEs in Ethiopia is limited. The demand side findings and analysis revealed that access to finance is significantly influenced by the age of the firm, firm's previous engagement with banks, experience of the manager and whether firms are managed by the owner (owner-manager) or not. In a similar fashion, SMEs specific factors such as poor financial records of SMEs, lack of adequate collateral, SMEs poor management of risks, and informalities of SMES are the major obstacles underlined by banks and MFIs to their engagement with SMEs. In similar study conducted by Fatoki and Asah (2011) find out that firm size impacts SMEs access to debt finance from commercial banks whereby small enterprises are less favored to large firms. Cenni et al., (2015), also postulated that, large firms can gain more bargaining power and they can negotiate with banks the credit terms which may facilitate loans with fewer restrictions and larger loan sizes. In relation to collateral, Fanta (2012) found that firms that own assets for collateral are found to have a relatively better access, signifying the importance of collateral in the credit market. In addition, Love et al. (2016) also find that the introduction of collateral registries for movable assets can increase the likelihood of firms having access to bank financing by 10 percentage points, while also reducing lending rates and increasing loan maturities. Fatoki and Asah, (2011) also, suggested that operators of SMEs have to own more tangible assets that can create higher value on their firm to accelerate borrowing security.

Because, the higher the value of assets the lower the interest rates of the debt to be secured by those assets.

In relation to the variable risk, Abor (2008), by comparing the capital structures of publicly quoted firms, large unquoted firms, and small and medium enterprises (SMEs) in Ghana, found an inverse relationship between risk and long-term debt ratio in all the sample groups, implying that firms with high risk levels exhibit low long-term debt ratios. And he suggests that such firms avoid accommodating more financial risk by employing less long-term debt. Further, the result shows that age of the firm, size of the firm, asset structure, profitability, risk and managerial ownership are important in influencing the capital structure decisions of Ghanaian firms.

Concerning age, the study conducted by Klapper et al. (2010) found that young firms (less than four years) rely more on internal financing than bank financing. Similarly, Woldie, et al. (2012) in Tanzania observed that firms at start-ups and less than five years depended more on informal financing sources. Using data from African countries, Beck and Cull (2014) showed that older firms are more likely to have a formal loan than their younger counterparts. On the other hand, Kirschemann (2016) in her study found out that younger firms are more likely to be credit rationed since they previously did not receive any loans from banks and as a result, it is difficult for banks to judge the loan repayment history. Similarly, the location of the enterprises also plays an important role in access to finance of SMEs because it enables the lenders to obtain better environmental information about the customers. For instance study conducted by Fatoki and Asah (2011) find out that SMEs located in urban are successful in access to debt financing compared those located in rural areas. Physical closeness between lenders and borrowers produce an improved form of environmental scrutinize that aid SMEs to access credit from lenders. Consequently, there is a positive relationship between firm's location and access to debt financing by SMEs.

To sum up, from the above reviewed Empirical studies one can raise three questions in the access to SMEs financing. First, there is evidence of an operational problem which restricts access to finance for SMES firms. Second; there is no single factor that can explain why SMEs have limited access to obtaining funds. Third studies revolving around the relationship between the determinants of access to finance considered in this study seems inconclusive, i.e., some studies found positive association, while the others found negative association. Moreover like other developing economy, research conducted in Ethiopia in the area of determinants of firm's financing decisions generally focused on the large enterprise there by less attention were given for SMEs. Therefore, this empirical study is designed to address these short coming and, further, to find out firm specific determinants of access to finance of SMEs in case of Guji zone.

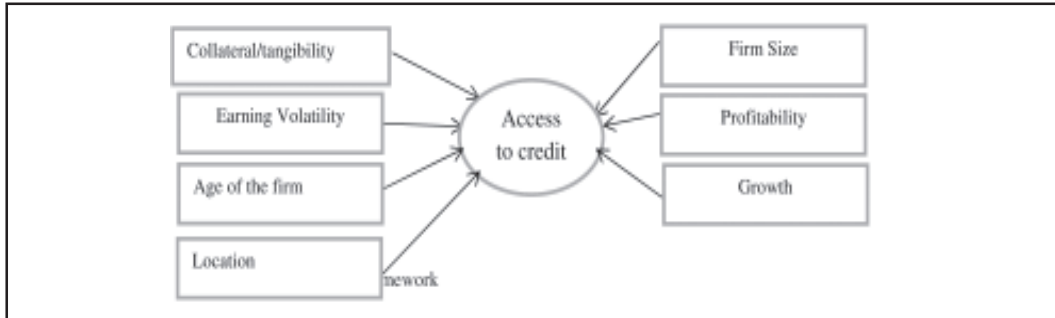
Conceptual framework

SME sector faces difficulties to access external finances for their investment projects because of lack of assets to be pledged as collateral. In that perspective SMEs fail to grow due to lack of collateral to pledge to access external sources of finance. In the same way, Geographic closeness between lenders and customers has an association with a firm to access to credit. The lenders who are geographically proximity to their customers are capable to utilize soft available qualitative information to establish the credibility of their customers for credit quality. Hence, Physical closeness between lenders and borrowers produce an improved form of environmental scrutinize that aid SMEs to access credit from lenders. Similarly, firm size impacts SMEs access to credit market whereby small enterprises are less favored to large firms. The other factor influence access to finance is age of the firm, Firms at the early stage of operation used to experience difficulties in access to debt finance because of informational disparities. Regarding profitability relationship with access to credit, from the point of view of the pecking-order theory, firms prefer internal financing to external. So, more profitable companies have a lower need for external

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financing or credit. Finally, other factor affects credit is earning volatility or risk, various studies in different countries suggest that a firm’s optimal

credit level is inversely related to the volatility of earnings. Therefore, based on these theoretical explanations the conceptual framework for this study is as follows:



Methodology

To clearly understand and analyze the possible determinants of access to debt finance for SMEs in Ethiopia, particularly in Guji Zone the study adopted a quantitative research approach. Quantitative approach is best to test the theoretical relationship between variables. As Yesgat (2009) noted to support this idea as a “quantitative research approaches tests the theoretically established relationship between variables using sample data with the intention of statistically generalizing for the population under investigation”. This study employed survey strategy using questionnaires method due to the following reasons: surveys are relatively inexpensive (especially self-administered surveys), the rapid turnaround in data collection and surveys are used to generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of the intended population than other method.

The target population of this study were SMEs which are recognized by the Ministry of Trade and Industry office of the selected city (BuleHora, Adola and Garba), in which a total of 366 SMEs were registered and in operation. However, due to six years panel data were used for the study all 366 SMEs were not capable to provide the required information so, 80 SMEs those are registered after 2002 E.C were deliberately excluded from the sample and resulted in the

actual sample frame of 286. Hence, based on the Yamane’s formula with 10% sampling error the total sample determined was 74. Shown as follows:

$$I.e.n = \frac{N}{1 + N(2)^2}$$

Where: n=Sample size
N=Total population
e=the level of precision

$$n = \frac{286}{1 + 286(0.1)^2} = 74.0932 \approx 74$$

To select the determined sample size from the actual source list simple random technique was used. Due to Random sampling ensures the law of Statistical Regularity which states that if on an average the sample chosen is a random one, the sample will have the same composition and characteristics as the universe.

Model Specifications

The dependent variable of the study is access to finance (Leverage) while the independent variables are tangibility, growth opportunities, risk, location, profitability, age and size. To capture these firm specific variables effect on access to finance and to control for omitted variables that differ between SMEs but are constant over time, the study used multiple regression (OLS) method. The following model

is specified based on the relationship sketched in the theory:

$$LVE_{it} = \alpha + \beta_1 Prof_{it} + \beta_2 Tang_{it} + \beta_3 Grh_{it} + \beta_4 EarVol_{it} + \beta_5 Age_{it} + \beta_6 LO_{it} + \dots + \epsilon_{it}$$

Where;

- *LVE is leverage ratio of SMEs or dependent variable*
- *α is the intercept of the equation/ constant term*
- *β is the slope of the coefficient for seven Ind. Variables*
- *i is sampled companies i = 1-130*
- *t :time/period starts from 2002-2007*

Finally, to test the hypothesis, the relationships between access to finance and seven explanatory variables, multiple regression analysis is used for the study. In analyzing the data, the researcher used Eviews9 software packages.

Analysis and Discussions of Results

This section of the paper focuses on the analysis and discussion of results. A total of 65 completed questionnaire returns were collected out of a targeted sample of 74 SMEs, yielding 87.84% response rate which is pretty substantial considering our societies beliefs with regards to sharing information. As it was explained in methodology part, multiple regressions (OLS) were used to identify determinants of access to finance. Before, Regression analysis, unit root test for data stationary and model would be estimated to know whether the model is pooled, fixed effect, or random effect as well as a diagnostic test is conducted to increase the reliability of the study.

Data Stationery Test

As a Panel data have both the dimensions of time series and cross-sections, unit root test is essential to check the data non-stationery. There are several reasons why the concept of non-stationary is important and why it is essential that variables that are non-stationary be treated differently from those that are stationary. If two stationary variables are generated as independent random series, when one of those variables is regressed on the other, the t-ratio on the slope coefficient would be expected not to be significantly different from zero, and the value of R² would be expected to be very low. This seems obvious, for the variables are not related to one another. However, if two variables are trending over time, a regression of one on the other could have a high R² even if the two are totally unrelated. So, if standard regression techniques are applied to non-stationary data, the end result could be a regression that ‘looks’ good under standard measures (significant coefficient estimates and a high R²), but which is really valueless.

Levin, Lin and Chu (LLC) (2002) have shown that the use of a unit root test for a pooled time series and cross-sectional (panel) data can significantly increase the power of the test. They developed their method from a multivariate generalization of the ADF test, and provided statistical foundation for panel unit root tests. The following table reports the LLC unit root test summary result for each variable.

Based on the LLC unit root test method the hypothesis is:

H0: panel data has unit root (non-stationary)

H1: panel data has not unit root (stationary)

Table: 1 Unit root test

Variables	T-Statistic	Prob.**	Decision
LEV	-24.3990	0.0000	H0: is rejected at level i.e. stationary
TAG	-3.87435	0.0001	H0: is rejected at level i.e. stationary
GRO	-60.6654	0.0000	H0: is rejected at level i.e. stationary
RISK	4.4 ^E +16	1.0000	H0: is not rejected at level i.e. non-stationary
PRO	-11.5248	0.0000	H0: is rejected at level i.e. stationary
SIZE	-15.3050	0.0000	H0: is rejected at level i.e. stationary
AGE	0.9459	1.0000	H0: is not rejected at level i.e. non-stationary
Location	-0.38599	1.0000	H0: is not rejected at level i.e. non-stationary

“***” significant at 1% level except risk, location and age (Source: Regression output of Eview9)

As stated above Levin–Lin–Chu unit root test were used for this study and Schwarz’s criterion has chosen with automatic lag selection in the test, the Levin–Lin–Chu test assumes a common autoregressive parameter for all panels, so this test does not allow for the possibility that some data contain unit roots while other data do not. The null hypothesis is that the series contains a unit root, and the alternative is that the series is stationary. As clearly exhibited in table 1, of the test summary results of LLC, the data of five variables including dependent variables are stationary at level, while the data of three variables risk, age and location are non-stationary at all. Location variable is non-stationary, because the same kilometer was used to measure distance from financial institution per a single company for the six consecutive years. The same is true for the variable Risk single calculated risk rate for each single company is applied for six consecutive years. But variable age data is non-stationary may be due to some firms selected were the same operating years (age). It is therefore, possible to validly undertake hypothesis tests about the regression parameters of this study by using this data, since the dependent variable and most of the independent variables in this regression are stationary, except for the three variables because of the above stated reasons.

Diagnostics test and Model specification

Statistical Distributions for Diagnostic Tests

As stated earlier, the data analysis method used for this study is multiple regressions (OLS). There are five assumptions relating to the classical linear regression model (CLRM). If those assumptions are violated, the model could encounter any combination of three problems: the coefficient estimates ($\hat{\alpha}$'s) are wrong, the associated standard errors are wrong and the distributions that were assumed for the test statistics are inappropriate. Therefore, before going to the regression analysis the researcher should test the validity of those assumptions.

Assumption of $E(u_t) = 0$

The first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. So, as long as this study included constant term this assumption is satisfied.

Assumption of Homoscedasticity (variance of the errors are constant $var(u_t) = \sigma^2$)

Fortunately, there are a number of formal statistical tests for heteroscedasticity, and one of the simplest such methods is the Breusch-Pagan-Godfrey test. So, in this study the researcher used Breusch-Pagan-Godfrey test. Table (2) below presents the test statistics.

Under Breusch-Pagan-Godfrey test: the hypothesis tested is:

- H0:** variances disturbances are homoscedastic.
- H1:** variances disturbances are heteroscedastic.

Table 2: Hereroscedastic test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	15.45759	Prob. F(7,382)	0.0112
Obs*R-squared	86.08516	Prob. Chi-Square(7)	0.0000
Scaled explained SS	92.68350	Prob. Chi-Square(7)	0.0000

Source: Regression output of Eview9

In the above table 2: of Breusch-Pagan-Godfrey test result, it is clearly indicated that there is an evidence for the presence of heteroskedasticity, because the result is statistically significant at 5%. So, the null hypothesis that states variances disturbances are homoscedastic is rejected. This is because hetrosedasticity is expected in situation

where heterogeneous sizes of SMEs are included in the model. This is evident in the data collected that the SMEs asset shows large variation.

Assumption of Normality

One of the most commonly applied tests for normality is the Bera—Jarque (BJ) test. BJ uses the property of a normally distributed random

variable that the entire distribution is characterized by the first two moments the mean and the variance. A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3 with the histogram should be bell-

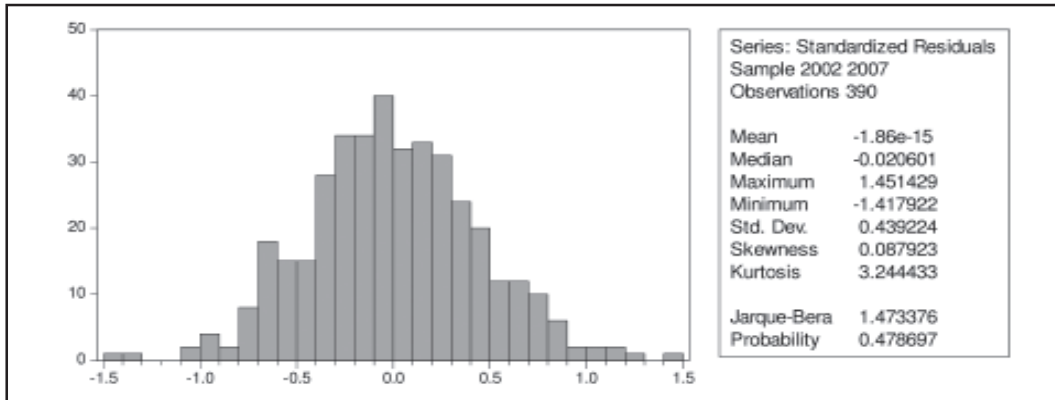
shaped and the Bera—Jarque statistic would not be significant.

According to Bera—Jarque (BJ) test: the hypothesis is as follows:

Ho: Residuals follow normal distributions

H1: Residuals are not normally distributed

Figure: 2 normality test



Based on the test result shown above figure 2, the residuals were normally distributed because the kurtosis is almost equal to 3 and its Jargue-Bera probability is insignificant at 5%, significant levels. And also the histogram is bell-shaped. Therefore, **HO:** that states residuals follow a normal distribution would not be rejected.

Assumption of Multicollinearity

According to Chris Brooks, in any practical context, the correlation between explanatory

variables will be non-zero, although this will generally be relatively benign in the sense that a small degree of association between explanatory variables will almost always occur but will not cause too much loss of precision. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multicollinearity. In order to examine the possible degree of multicollinearity among the explanatory variables, Pearson correlation matrixes of the variables were presented in table: 3 below:

	PRO	LOCATION	RISK	SIZE	TAG	GRO	AGE
PRO	1.000	0.290	0.3095	-0.417	-0.1892	-0.1579	-0.00084
LOCATION	0.290	1.000	0.1128	-0.1339	0.0381	0.0605	0.0071
RISK	0.309	0.1128	1.000	-0.3407	0.2377	0.0281	0.0189
SIZE	-0.417	-0.1339	-0.3407	1.000	0.0966	0.1169	-0.0093
TAG	-0.189	0.0381	0.2377	0.0966	1.000	0.1555	0.1008
GRO	-0.157	0.0605	0.0281	0.1169	0.1555	1.000	0.0642
AGE	-0.00084	0.0071	0.0189	-0.0093	0.1008	0.0642	1.000

Source: Regression output of Eview9

One measure to detect multicollinearity is tolerance Value. Tolerance value is the amount of an independent variable's predictive ability that is not predicted by the other independent variables in the equation (Hair et al, 2006). According to Gurjatati, (2003), as a rule of thumb, the inter-correlation among the independents above 0.80 signals a possible multicollinearity problem. Gujati, (2003) However, as indicated in the table:3 above, almost all variables have low correlation power (less than 0.5) and this implies no multicollinearity problem in the explanatory variables included in this model.

Model Testing

There are three panel data models; Pooled regression model, fixed effect or LSDV model and random Effect model. Pooled model as its name indicates pools all observations in the OLS regression. Meaning that it implicitly assumes that the coefficients including the intercepts are the same for all the individual firms or it negates the heterogeneity or individuality that may exist between firms. While, the term fixed effect model is used with the assumption that, although the intercept may differ across firms but intercept

does not vary over time that means its time invariant. Random effect model allows each firms have a common mean value of intercept which is time variant. Therefore, to select which model is appropriate for our data different test should be conducted first.

To determine the kind of estimation (model) in panel data, different tests are used. In this study to know which model (random effect, fixed effect and pooled), is suitable for the given data, the researcher used Hausmann test and Wald test. A classical application of the Hausmann test for panel data is to compare the fixed and the random effects models whereas Wald test is used to compare fixed effect to pooled regression models.

Hausmann test: Based on Hausmann test: the hypothesis is;

H0: Random effect model is appropriate

H1: Fixed effect model is appropriate

Then based on the test result, if P-value is statistically significant fixed effect model is appropriate otherwise, random effect model is appropriate. Therefore the following table shows the test result.

Table:4, Hausman Test

Correlated Fixed Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	69.707267	6	0.0000

Source: Regression result of EView9
Based on the test result the p-value is statistically significant (not different from 0) therefore, null hypothesis which states Radom effect model is appropriate should be reject. Meaning that, fixed effect model is appropriate.

Again in order to know whether this fixed effect model is appropriate or not, it is necessary to

double check against the pooled regression model by using Wald test. The test result is presented in table:4, bellow:

Wald test: Under the Wald test: the hypothesis to be tested is:

H0: Pooled regression model is appropriate

H1: Fixed effect model is appropriate.

Table 5: Wald Test Result:

Equation: Wald Test			
Test Statistic	Value	Df	Probability
F-statistic	1105.110	(8, 382)	0.0000
Chi-square	8840.884	8	0.0000

Source: Regression result of EView9

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The result of the above table5: reveals that, we can reject the null hypothesis because p-value is very small i.e. 0%. Meaning that Fixed effect model is appropriate. Thus, both Haussmann test and Wald test are telling that, the fixed effect model is appropriate to represent this data. Therefore, final estimation method used in this

research is fixed effect model. The results of fixed effect model are shown in table 6: bellow;

Regression Analysis

This section presents summary results of the regression outputs for the factors that determine SME credit access and from which detailed analysis and discussion of the result was given.

Table 6: Regression output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOCATION	-0.023661	0.007416	-3.190640	0.0015
PRO	-4.452015	0.295638	-15.05899	0.0000
RISK	-0.276413	0.056908	-4.857165	0.0000
SIZE	0.054227	0.010829	5.007652	0.0000
TAG	0.656334	0.176387	3.720996	0.0002
GRO	0.887764	0.135657	6.544204	0.0000
AGE	0.032951	0.010140	3.249732	0.0013
C	1.951675	0.211733	9.217630	0.0000
R-squared	0.669654	Mean dependent var		2.015764
Adjusted R-squared	0.663601	S.D. dependent var		0.764190
S.E. of regression	0.443230	Akaike info criterion		1.230843
Sum squared resid	75.04490	Schwarz criterion		1.312199
Log likelihood	-232.0143	Hannan-Quinn criter.		1.263093
F-statistic	110.6234	Durbin-Watson stat		0.557806
Prob(F-statistic)	0.000000			

Source: Regression result of EView9

As shown in the above regression result table: 6, it would be observed that the coefficient of determination of R-squared and Adjusted R-squared were 67% and 66.4% respectively. This infers that 66.4% of the variation in access to finance (credit) is successfully explained by the factors included in the model such as profitability, size, growth, tangibility, age, risk, and location. On the other hand, the remaining 33.6% of variations in access to finance (credit) were caused by other factors that were not included in the model. Since, this will suggest further research should be conducted to investigate the other factors (33.6%) that affect access to finance in SMEs. This indicates that the model is useful for making predictions or decisions since the predictive power of the model which is measured

by the value of adjusted R2 is high (more than 50%) oralmost close to100%. Concerning to the adequacy of the model, the probability of F-test which measures the existence of linear relationship between the dependent and independent variable revealed that a highly significant relationship exist between the variables.

The above table: 6, also demonstrates that, according to the model, all explanatory variables included in this study were statistically significant at 5% significant level. Meaning that, variations in any of the variables included in the study such as: profitability, size, growth, tangibility, age, risk, and location will cause in variation of dependent variable (access to finance). In addition to that, the result also disclosed that, the coefficient of four statistically significant explanatory variables,

such as: tangibility, size, age and growth were positive while, profitability, location and risk have a negative coefficient.

Discussions of Results

It's a known fact that, in our financial policy fixed or tangible assets are used as collateral requirements that are committed by borrowers to a lender as security for debt payment. In agreement with the expected outcome, the regression result revealed in the above table: 6, demonstrates as; tangibility is statistically significant at 1 per cent and positively associated with the dependent variable which is access to credit or leverage. This implies, the greater the proportion of tangible assets for SMEs, the more willingness of lenders to supply loans, consequently, loan/credit should be come high. In other words, firms with more tangible assets have a greater ability to secure debt and lenders suffer a smaller loss of value when firms go into distress; Because, these assets are insurance for the lenders in the event of winding up. On the other side, the collateral requirements when in place can reduce negative consequences that can rise due to an improper utilization of the funds by SMEs. Thus, it's due to this fact that (for not having adequate resources to provide as collateral) most SMEs are denied and discriminated by the lenders in provision of financing. This idea is also supported by the findings of Kihimbo et al. (2012) that most SMEs are denied and discriminated by the lenders in providing financing. In addition, Olanrewaju A. et al. (2016), strengthen the finding of this study by stating, SME sector faces difficulties to access external credit for their investment projects because of lack of assets to be pledged as collateral. As mentioned, in the literature this observation (positive sign) supports the idea of both the static trade-off theory and agency theory. But, in a pecking order framework this relation is predicted to be negative due to information asymmetries.

In relation to the variable age, as revealed in the above table: 6, this study finding exhibit that, age is statistically significant at 1% and positively associated with access to finance (credit) of

SMEs. Similar to this study finding, firm age has been widely recognized as a significant determinant of accessibility to financing in many studies. The main rational explanation for this finding is that; first, as younger firms are usually characterized by informational impenetrability as a consequence of not having an established track record, this may lead to the reluctance of formal financial institutions to lend to these firms. That means young firms often face difficulties in obtaining external finance because of informational disparities. Second, age of firms might be a signal of experience and therefore probability of business failure or default is less. Third, when the financial system accommodates relationship lending, older firms will create a stronger relation with financial institution and hence have a better access to financial service compared with younger firms that have no or lesser ties with their financier And finally, it is easier to monitor well-established firms where old firms are more likely to have access to bank finance or face less constraints. This has been confirmed by Abor and BiekpeN. (2007), they find that older firms have a stronger relation with their bank or MFIs and hence a better access to bank credit compared with younger firms that have no or lesser ties with their financier. This finding also in line with, the agency and trade-off theory; that states the age of the firm connotes a standard measure of reputation and positively related to access to finance. On the contrary, pecking order theory, advocates that older firms are able to accumulate funds and need less to borrow either long-term or short-term. In other words, a new firm will not have had time to retain funds and may be forced to borrow. Consequently age is likely to be negatively related to credit finance.

With respect to the SMEs access to finance, as uncovered in table 6, the study found that the coefficient of SIZE is statistically significant at 1 percent and positively associated with our dependent variable. This indicates that as the firm size increases the loan size also increases. That mean, larger firms can show better credit quality by reducing information opacity and that helps

them to get more loans from financial institutions. On the other hand, smaller firms may find it relatively more costly to resolve issues of information asymmetries with the providers of credit finance, thus, may present lower loan ratios. This finding is consistent with the study finding of Gebru G., (2009), that states compared to MSEs with large size, MSEs with small size are less likely to access credit from formal financial institutions. Theoretically, this finding is in line with the combined prediction of trade-off, pecking-order and agency cost theory. With regard to the variable Growth, many studies show contradictory or inconclusive evidence in respect of the sign. But, as displayed in table 6, of this study growth is statistically significant and positively associated with access to finance (credit) at 1% significance level. This is based on the rationale that being other things constant a higher growing firm demands huge funds/capital to finance their growing activities. Thus, growing firms may not be capable to finance all its growth by the internally generated funds. Necessarily, firms with comparatively high growth will incline to search for external finance (credit) to finance all their growth opportunities. This finding is also aligned to Pecking order theory; predicts that firms with more investments should accumulate more debt over time. Thus, growth and access to finance/credit are expected to be positively related.

In relation to the variable profitability, as predicted in the expected outcome of the study; the finding of this study shown in table: 6, also discloses that; significant and negative relationship exists between access to finance (credit) and profitability. The interpretation of this result implies that profitable firms would retain more earnings from their high profit and have a preference for inside financing over outside debt financing. Thus, higher profitability of the enterprise implies highly reliance on internal financing or less reliance on debt financing. This finding is in line with Myers' pecking order theory; in that profitable firms initially rely on less costly internally generated funds and subsequently look for external sources if

additional funds are needed. However, in contrary to this theory, positive relationship is expected according to Static trade-off theory, that expect profitable firms have more debt since bankruptcy costs are lower and interest tax shields are more valuable for profitable firms.

The location where SMEs sited is another factor that affects in accessing finance. As revealed in above table: 6, this study finds that location is significantly and negatively related with access to SMEs finance (credit). The customary explanation for this finding is that, financial institutions that are closer to borrowing firms enjoy significantly lower transportation and monitoring costs, compared to those financial institution that are relatively far, from their customer. Consequently, borrowers who are near to financial institutions get higher credit. In other words, lenders who are geographically closeness to their customers are capable to utilize soft available qualitative information to create the trustworthiness of their customers for credit quality. This finding is also in line to the finding Pandula G.(2013), he found that the probability of accessing bank loans was about 3.6 times higher for the firms located in main business cities than for firms in rural areas. With respect risk, Trade-off and pecking order theories both predict a negative relationship between leverage and business risk. As presented in the table: 6 above, this study finds statistically significant and negative relation between access to finance (credit) and risk, which comparable with theoretical justification. Thus, the finding implies firms that are viewed as risky by creditors find it more difficult to borrow or get credit. In addition, given agency and bankruptcy costs, the less stable earnings of the enterprises, the greater is the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions.

Conclusions

It is an unquestionable fact that SMEs are the engines of every economy and a potential source of employment and income, particularly in the developing countries like Ethiopia. Despite, the potential role of SMEs to enhance growth and

job creation in the country, a number of factors affect their ability to realize their full potential. Among others, one important problem that SMEs often face is access to capital. Thus, this study was inspired to examine determinates of access to finance for SMEs in Guji zone using firm level panel data. There are various factors that may affect the financial system's ability to provide credit to SMEs businesses. But in this study, only seven determinants of access to finance for SMEs such as: tangibility, firm size, growth rate, risk, age, profitability and location were selected from the existing finance literatures.

For analysis purpose multiple regression were used. According to the study result, all the seven variables were statistically significant at 1%. A regression analysis result also revealed that, access to finance (credit) has: a positive relation with; tangibility, size, age and growth. Conversely, have a negative relation with; profitability, location and risk (earning volatility). The study findings were consistent with various theoretical propositions typically associated with the determinants of financing decisions of firms. Particularly, the finding supports that, among the seven statistically significant determinants, five determinants such as: Size, growth rate, profitability, and location were supported a literal prediction of the pecking order theory. Whereas, the two determinants i.e. tangibility and age: supported the combined prediction of, trade-off, and agency cost theory. This implies that, the pecking order theory seems to be principal in the financial decision of firms in our country context. Pecking order theory is designed to explain the effects of the information asymmetries between the lender and borrowers. As a result of this information asymmetry, financing SMEs sectors are considered by the lenders very risky. Thus, the results of the study supported that, some of the views from the modern finance theory were adaptable to our country's financing decision in that some firm specific factors that were relevant for explaining financing decision in the developed countries were also relevant in Ethiopian context even if, institutional differences exist between Ethiopia and the developed countries.

Research Implications and limitations

A study like this has many implications; first, it would highlight challenges faced by the SMEs in access of credit and point out ways of managing the challenges. Once the challenges and ways of managing them are identified, it will assist credit service providers with information that can be used to extend their services to these SMEs. Second, the financiers would have valuable information and insight on to how they can plan, if at all they are willing to continue financing SMEs. Finally, policy makers can use the findings of this research paper to design and implement policies that are meant to enhance access to credit by SMEs and they contribute significantly to growth and development of the country. However, although analyzing every firm-specific (internal) factors as well as external factors that might explain the access of credit of SMEs is equally important, but this study would only focus on firm level (internal) determinants of access of credit of SMEs thereby no attention will be given to external determinants of access of finance for SMEs.

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