Factors Affecting Performance of Small and Medium Sized Business Enterprises
(The Case of Yeka Sub-City Addis Ababa, Ethiopia)

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Abstract: A strong small and medium enterprises (SMEs) sector contributes highly to the country's economy, contributing to the gross domestic product (GDP) by reducing the level of unemployment, reduction in poverty levels and promotion of entrepreneurship activity. They have ability to make a meaningful reduction in the high level of unemployment and contribute to the GDP of the local economy in Ethiopia. Therefore, the aim of this study was to identify the internal and external factors influencing the performance of small and medium sized enterprises in Yeka sub-city Addis Ababa. In order to meet the objectives of the study, data collected through questionnaires were analyzed using statistical analysis such as descriptive and inferential analyses by STATA V-13 & SPSS-V20 software. Mean and Standard deviation explained the descriptive statistics while multiple linear Regression was applied to Show prediction of independent variables on dependent variable (performance). Information was gathered using a five point Likert scale questionnaire from a sample of 90 respondents. The sample operators were selected using stratified sampling and simple random sampling techniques. The empirical study elicit eight major independent variables which seem to affect performance of SMEs in Yeka sub-city which include: Inadequate finance, Lack of working premises, Marketing problem, inadequate infrastructure, Poor management practices, Technological, Entrepreneurial and macroeconomic factors. The findings further indicated that among the independent variables financial factors, working premises, Entrepreneurial and marketing factors were the major factors that significantly affected performance. Based on the findings it was recommended that Formal financial institutions like banks and micro finance institutions should improve access to finance through offering a better lending terms and conditions and government to establish a centrally managed marketing sites that will equally give access to market in order to improve performance of SMEs in Addis Ababa.

Keywords: Performance, Small Enterprise, Medium Enterprise, Ethiopia.
1. Introduction

1.1 Background of Study

A strong small and medium enterprises (SMEs) sector contributes highly to the country’s economy, contributing to the gross domestic product (GDP) by reducing the level of unemployment, reduction in poverty levels and promotion of entrepreneurship activity. SMEs have the ability to make a meaningful reduction in the high level of unemployment and contribute to the GDP of the local economy in Ethiopia. Besides assisting in curbing the high level of unemployment, SMEs can be used as a means of transforming the country, by redistributing the productive assets, amongst the previously disadvantaged. The failure rate of SMEs is high throughout the world with the situation being no different to Addis Ababa. Failure of SMEs in study area may be attributed to many factors and entrepreneurial culture. The role of finance has been viewed as a critical element for the performance of small and medium-sized enterprises. Previous studies have highlighted the limited access to financial resources available to smaller enterprises compared to larger organizations and the consequences for their performance and development. Typically, smaller enterprises face higher transactions costs than larger enterprises in obtaining credit (Saito and Villanueva, 1981). Insufficient funding has been made available to finance working capital (Peel and Wilson, 1996). Poor management and accounting practices have hampered the ability of smaller enterprises to raise finance. Information asymmetries associated with lending to small scale borrowers have restricted the flow of finance to smaller enterprises. In spite of these claims however, some studies show a large number of small enterprises fail because of non-financial reasons (Liedholm, MacPherson and Chuta, 1994). Study by Tushabonwe-Kazooba, (2006) revealed that poor record keeping and lack of basic business management experience and skills are major contributors to failure of small business. Researchers have also identified lack of access to external finance and weak capital base, inexperience in the field of business, particularly lack of technical knowledge plus inadequate managerial skills, lack of planning and lack of market research as causes of small business failure (Van Stel and Storey 2004). The solution for solving problems of economic growth in developing countries often resides in the performance of small scale industries. It is expected that the gains to be derived from the establishment of small-scale industries will be translated into the generation of employment at a low investment cost. Therefore, the objective of this study is to identify the factors which affect the performance of Small and Medium Enterprises (SMEs) in Yeka sub-City; Addis Ababa.

1.2. Statement of the problem

Ethiopia recognized the important contribution that SMEs could make in poverty reduction, employment creation and private sector development, while raising the national income. In Ethiopia half of the work force is in SMEs, Addis Ababa only accounts 40% of the SMEs operators (Sarnies, 2004). On the other hand the country has one of the highest unemployment rates and the number of urban unemployment rose to 1.1million and the number of urban population below poverty line is 37% (Endalkachew, 2008). Hence, to promote the proliferation of SMEs and enhance its performance to enable to tackle the problem of unemployment and poverty reduction, the government forwarded SMEs Development Strategy in 1997, in 2003 and in 2011. Regardless of the different promotional efforts made by the government the sector was highly constrained by poor productivity, poor performance and stagnant growth, these was mainly due to unfavorable legal and regulatory frameworks, underdeveloped infrastructure, poor business development service, limited access to finance, ineffective and poorly coordinated institutional support. (Endalkachew, 2008).The problems encountered by SMEs are both at the startup and establishment phases. Majority of SMEs are survival driven, strive to secure the basic needs of an entrepreneur, with lack of capital, skill and knowledge to manage their business. All these forced enterprises to produce poor quality of products and have a lower productivity; these situations led for the poor performance, stagnant growth. Study also showed that, in SSA countries SMEs face a failure rate of 85% (Fedahuonsi, 1997:170-186). As a result the contribution of SMEs to the national economy was very low as compared with that of other African countries of Kenya, Tanzania and Uganda (Melee Worku 2009:1-9).
In small and medium enterprises area, various studies in Ethiopia have investigated like Fetene, (2010) and Dereje, (2012) in SMEs. They are focused on only access to finance in SMEs. However, in addition to access of finance the researcher believes that the study fills an important gap by considering other determinants that affect performance of small and medium enterprises. The previous study also used only simple descriptive analysis and didn’t include the most important variables in the study. Therefore, this particular study tries to identify to what extent internal and external factors affect the performance of small and medium-sized enterprises that are conducting business by using both simple descriptive and econometric methods in Yeka sub-city of Addis Ababa.

1.3. Objectives of the study
1.3.1. General Objective
The General objective of the study was focused on describing factors influencing the performance of small and medium sized enterprises in Yeka sub-city.

1.3.2. Specific Objectives
The specific objectives of the study were:-
1. To assess the internal factors those affect the performance of SMEs.
2. To assess the external factors those affect the performance of SMEs.

2. Review of Related Literature
2.1.1 Definition of Small and Medium Enterprises
There is no universally accepted definition of SMEs because in each economic system every country has its own classification according to their industrial regulation. The categorization of SMEs depends on qualitative judgment such as number of paid up employees, size of enterprise, and amount of capital employed. In Britain and USA small and medium scale industries classified based on yearly gross revenue and the number of workers they employ. In Britain small scale businesses classified based on paid up employees that do not exceed 200 and annual gross revenue of 2 million pound. Japan classifies SMEs as manufacturing enterprises with total capital not exceeding 100 million yen with 300 employees. In the whole sale trade the classification requires capital not exceeding 30 million yen and less than 100 employees. In retail and service trade SMEs classified based on total capital not exceeding 10 million yen and 50 employees respectively, Ekpenyong and Nyong(1992, p 4). This indicates that the industrial regulation of different country treat and categorize SMEs in different ways. The Ethiopian Ministry of Trade and Industry (MoTI) defines SMEs as follows:

**Micro enterprises:** are small businesses with total capital investment not exceeding Birr, 20,000 and excluding these enterprises with high technical consultancy and other high-tech establishment.

**Small enterprises:** are businesses with a total investment between Birr, 20,000 up to Birr, 500,000 and do not include these enterprises with advanced technology and high technical consultancy.

**Medium enterprises:** are these business enterprises with a total investment between Birr, 500,000 up to Birr 1 million and including those enterprises that have high technical consultancy and excluding other high-tech establishment.

Therefore, MoTI classifies SMEs in Ethiopia based on capital investment and on the bases of establishment. This is important because the sector accounts for large businesses throughout the country so that proper definition and classification is of essence for policymakers in their dealings with SMEs. Judging from the foregoing, it is easy to see that the main criteria for the definition of what constitutes SMEs stem from considerations of the labor pool and turnover level, also viewed as capitalization of a firm. Yet still, a number of scholars prefer to use the legal terminology to serve their definition goals. In an apparent effort to reconcile the widening gulf in conceptualization of firms, Storey (1994) takes issue with the use of size to define firms as one that is inherently limiting.
The crust of his contention is that sizes vary oftentimes based on the standard benchmark used by a specific industry. Thereby, insisting that using firm size alone lacks the tentative whims to be universally accepted.

A pioneering effort at putting forward a credible definition of SMEs began in the UK with the publication of the so-called Bolton Committee Report of 1971. The author sought to categorize his definitions in terms of a statistical and an economic model. By way of summary, the report’s statistical categorization outlined three features to suit the statistical definition. They are:
1. Measuring the changing trend of a small firm’s overall economic contribution;
2. How the size of the small business enterprise influences its input to overall national output measured in terms of GDP;
3. Resorting to off-road assessment to know what constitutes small firms using verifiable statistical instruments. On the other hand, the economic categorization has the following related three features as presented by the Bolton Committee.
   1. A small firm is one whose management style is not within the conventional style but run along the interests of the owners;
   2. The firm occupies a limited share of the total market of the industry within which it operates;
   3. Its operations are independently run without representing any external parent company.

As noted in the preceding paragraph, the definitions put forward by the UK’s Bolton Committee (1971), though commendable is wrought with technical difficulties in the phase of evolving trends in the conduct of businesses over the last several decades. Consequently, other attempts have come from among others the European Commission, whose chief criteria for defining SMEs is drawn from the employee size of the firm. The European Commission has therefore defined Micro enterprises as those employing less than 10 employees. Those that employ between 10 and 99 are classified as small enterprises and those that employ between 100 to less than 500 are considered medium enterprises. Storey (1994) says, by the definition put forward by the European Commission the blanket definition of SMEs in terms of employee pool is simply a labor force that is less than 500 people.

Apart from aggregating the SME sector along employee lines, the European Commission’s definition highlights the different subsectors within the industry to the extent that it separates them into micro, small and medium enterprises.

Going by what is already known, Weston and Copeland (1998) acknowledge that the main challenge within the SMEs literature is the explicitly lack of consensus regarding theoretical definitions. For this reason, it is left to individual scholars to pick and choose from the definition pool the one that best suits their interest at any given moment.

2.1.2 Empirical Literature Review

The Ethiopian Ministry of Trade and Industry (MoTI) classifies MSMEs in Ethiopia based on capital investment and on the bases of establishment. **Micro enterprises:** are small businesses with total capital investment not exceeding Birr, 20,000 and excluding these enterprises with high technical consultancy and other high-tech establishment. **Small enterprises:** are businesses with a total investment between Birr, 20,000 up to Birr,500,000 and do not include these enterprises with advanced technology and high technical consultancy. **Medium enterprises:** are these business enterprises with a total investment between Birr, 500,000 up to Birr 1 million and including those enterprises that have high technical consultancy and excluding other high-tech establishment.

According to Osoro and Muturi (2013), the SMEs contribute immensely to the economic development and wealth creation through employment creation estimated at 3.2 million people in 2003, generation of income, increasing productivity, facilitating technological transfer, and creation of market linkages.

According to Philip (2010), a huge majority of firms worldwide are SMEs, and they play a significant role in the economy of a country. There is a broad consensus that a vibrant SME sector is one of the principal
driving forces in the development of a market economy. SMEs stimulates private ownership and entrepreneurial.

2.2 Contemporary Scope of SMEs in African Economies

SMEs are typically owned, operated and managed by proprietors sometimes in the form of sole or joint ownership. According to a study by Reuber and Fisher (2000) of SMEs in developing countries, most of firms under the broad category of SMEs are family owned mainly engaging the services of kindred and other related instances of hired external hands. There are cases of the externally hired hands merely serving apprenticeship roles, which in this case may not be eligible for salaries. Schmitz (1995) posits that given the low level of capitalization of SMEs most of them tend to operate in sectors utilizing extensive laborious techniques in contrast to largely established firms. Their primary activities according to Reuber and Fisher (2000) are mainly within the areas of primary sector manufacturing, retail and trading. Again, the question of the operational activities of SMEs is also largely influenced by the location, be it within an urban setting or a rural one for that matter. Retail activities are ideally suited for urban settings where as basic manufacturing can be carried out both in rural and urban areas. There are also related questions of national disparities when answering the question of SMEs activities. A country’s resource availability will invariably determine the specifics of the types of activities that will take place there. It naturally behooves on a resource endowed country to allow SMEs to engage in manufacturing, meanwhile, resource endowment in and of itself is not a sufficient barometer to gauge activity. Consumer and market trends are inordinate factors that should not be left out in the equation. For instance, it is important to put into proper perspective whether products or services will be targeting a domestic market or a foreign one. Doing so requires a comprehensive analysis of imperative considerations. In a related study Gebreyesus, Mulu (2009) looked at SMEs activities and operational scope in Ghana. Similar to the findings of Reuber and Fisher (2000), their study also subdivided SMEs into rural and urban operators. Within the urban group of firms there were those “formally organized” on the one hand against those that are “informally organized” on the other hand. The rural enterprises are generally informally organized and made up of individuals bonded by kinship or other forms of social connections.

They engage in activities utilizing primary resources within their catchment areas. Products that typically come out of their activities include fabrics and leather, ceramic designs, blacksmithing etc. Abor and Biekpe (2006) found that most SMEs in Africa are family businesses, with the majority of the operators being females. Because of their extensive engagement within the informal domain they are mostly not captured in official statistical recordings of national production and output. A resulting consequence of this anomaly is that they are left out in policy formulation thereby inhibiting any prospect for expansion and developments. Funding, a crucial life-line for business growth is also conspicuously denied them thanks to their informal status.

As stated in the opening section of this paper, the role of SMEs in facilitating economic and social development cannot be overemphasized, particularly for developing countries seeking to place a foot on the development radar. Among other reasons, the level of adaptability of SMEs to changing market trends is relatively more versatile than larger traditional firms (Quartey and Kayanula 2000). When it comes to the question of job creation they are also better placed to serve this purpose than classical large firms, firstly because of the fact that their production activities tend to be more laborious in nature (See Schmitz1995). By this singular fact their role in employment is acknowledged. Their demand for extra labor makes them more suited to serve the employment needs of rural and sub-urban populations in ways that offers opportunities for indigenes. They are further seen as a channel through which economic activities can be distributed to reduce regional discrepancies in job opportunities—moreover they trigger a move towards enhancing income distribution thanks to the dispersive scope of their activities in contrast to huge enterprises. Unlike the huge corporations, SMEs are able to judiciously use resources at all levels thereby leading to efficiency, an important ingredient for sustainable economic growth.
2.3. Conceptual Frame Work
Factors Affecting performance of SMEs

![Conceptual Frame Work Diagram]

3. Research Methodology
3.1. Description of study area

Addis Ababa is the capital and largest city of Ethiopia. It is the seat of the Ethiopian federal government. Addis Ababa has the status of both a city and a state. It is where the African Union has its headquarters and where its predecessor the Organization of African Unity (OAU) was based. It also hosts the headquarters of the United Nations Economic Commission for Africa (ECA), as well as various other
continental and international organizations. Addis Ababa is therefore often referred to as "the political capital of Africa" for its historical, diplomatic and political significance for the continent. Addis Ababa lies at an elevation of 2,200 meters (7,200 ft.) and is a grassland biome, located at 9°1′48″N 38°44′24″E Coordinates: 9°1′48″N 38°44′24″E. The city lies at the foot of Mount Entoto and forms part of the watershed for the Awash. From its lowest point, around Bole International Airport, at 2,326 metres (7,631 ft) above sea level in the southern periphery, Addis Ababa rises to over 3,000 metres (9,800 ft) in the Entoto Mountains to the north. The city is divided into 10 boroughs, called subcities (kifle ketema), and 99 wards (kebeles). The 10 sub cities are Akaky-Kality, Addis- ketema, Bole, Gullele, Abrade, Lydia, Kirkos Yeka, Kolfe-Keranio and Nefas silk Lafto.

Yeka sub-city is located in the North east Part of Addis Ababa city. The total area of the sub-city is 85.98 km square and 4,284.9 people live in one kilometer square. Moreover, its entire population of the area is 368,418 people. Yeka Sub-City Administration office is found Haya-Hulet (22) next to Lake Plaza Building. There are 13 woredas under it.

The Administration has 547 permanent and 24 contract employees. Meanwhile (England, Russia, Kenya) (German and Italy) (France), and (Israel and Belgium) embassies are found in sub-city woredas five, three, one, and nine respectively. In addition, in the sub-city there are 24 hotels and four recreation parts such as Yesera in wereda 12, Millennium in woreda ten, Yeka in wereda five, and France in wereda three. Furthermore, some of the bureaus, agencies, offices, and educational colleges and universities which are found in the sub-city are Road and Transport bureau, Civil Service University, Kotebe metropolitan university, Addis Ababa Traffic office, Ethiopian Athletics Federation and, Ethiopia Leadership Institution. There are also 15 orthodox, eight Muslim, and 16 protestant religion institutions.

![Figure 3.1: Political Map of the study area. Source: Yeka sub-city Department of Trade and Industry.](image-url)

### 3.2. Design of the Study

Research design is considered as the blue print and cornerstone of any study since it facilitates various research operations. The nature and objectives to be achieved and the means of obtaining...
information are the most important factors to be considered in order to choose the appropriate research design. To achieve the stated objectives, both quantitative and qualitative data methods were used to get accurate and more complete information. Using both quantitative and qualitative methods at the same time is more advisable. Because quantitative data provides precise summaries and comparisons, while qualitative data provides general elaborations, explanations, meanings, and relatively new ideas. Taking all these into account, multiple approaches which combine both quantitative and qualitative methods was used for this study. A descriptive cross- survey research method was administered to collect both qualitative and quantitative data that are used the study. The study was completed in less than one year period; therefore cross-sectional study design is the most appropriate one which was employed by this study.

3.3. Types and Sources Data

In this study both descriptive as well as exploratory research methods were employed. While searching for the general nature of the SMEs, exploratory research was conducted and secondary data was be examined and also qualitative primary research also conducted by taking in depth interview with the owners and employees of the selected SMEs. The descriptive design was applied to determine the effect of some of the determinants that influence the performance of Small and medium Enterprises (SMEs) in Yeka Sub-city of Addis Ababa city Administration.

Both primary and secondary sources of data were used. Interview questions were developed and in-depth interview was conducted with owners and managers of SMEs in Yeka Sub-City of Addis Ababa city administration as well as representatives from different institutions cooperating with these SMEs. Yeka Sub-City is one of the ten sub-cities of Addis Ababa City Administration. The target population of interest for this survey is SMEs, 919 in number on July, 2018 of Yeka Sub-City.

3.4. Sampling Technique and Sampling Size

To select samples of enterprises from the total population of SMEs, a stratified random sampling was applied to get a representative number of enterprises from each sector that was considered in this study. This technique was preferred because it was used to assist in minimizing bias when dealing with the population. With this technique, the sampling frame was organized into relatively homogeneous groups (strata), before selecting elements for the sample. The strata’s were sectors of SMEs including: The sample size selected here was considered as a representative of construction and manufacturing (CM), food and beverage (FB), textile and garment (TG), merchantize and retail shop (MR), and wood and metal work (WM) respectively. To select samples of SME operators from each strata (sectors) simple random sampling method applied from a complete list of enterprise operators in the sub-city. Sectors of SMEs systematically selected from the complete list of the SME, those sectors commonly available in all sub cities of Addis Ababa and those enterprises from privately own manufacturing sectors selected for the study because data from manufacturing sectors are measurable. Although there are no general rules, the sample size usually depends on the population to be sampled. In this study to select sample size, a list of the population formally registered by Yeka sub-city SMEs Office 2018 until May 2018 was used. A list containing names, address and the type of SMEs business engaged, of the total population of the study area was found from Yeka sub-city SMEs Office 2018.

The sample size selected here was considered as a representative of construction, food and beverage, textile and garment, merchantize and retail shop, and wood and metal work respectively. To estimate the sample representative the following formula was applied. Since it is relevant to studies were a probability sampling method is used. Yamane (1967:886) provides a simplified formula to calculate sample sizes. This formula was be used to calculate the sample sizes in study area. Where \( e^2 \)– Margin of errors/error margin 10% assumed for Equation below:-

\[
n = \frac{N}{1 + N(e)^2}
\]
Where \( n \) is the sample size, \( N \) is target population size, and \( e \) is the level of precision. When this formula is applied to the above sample,

\[
 n = \frac{919}{1 + 919(0.1)^2}
\]

Therefore the totals of 90 respondents were selected for the study.

### 3.5. Linear Regression Analysis

Linear regression is a method of estimating or predicting a value on some dependent variable given the values of one or more independent variables. Like correlations, statistical regression examines the association or relationship between variables. Unlike correlations, however, the primary purpose of regression is prediction. In this study multiple regressions was applied. Multiple regression analysis takes into account the inter-correlations among all variables involved. This method also takes into account the correlations among the predictor scores. Multiple regression analysis, is helped to see more than one predictor are jointly regressed against the criterion variable. This method is used to determine if the independent variables explain the variance in the dependent variable.

#### 3.5.1. Regression Functions

The equation of regressions on this study is generally built around two sets of variables, namely dependent variable (performance) and independent variables (macro-economic, working premises, technology, infrastructure, marketing, finance, management and entrepreneurial skill). The basic objective of using regression equation on this study is to make the study more effective at describing, understanding and predicting the stated variables.

#### 3.5.2. Regress Performance on Selected Variables

Following George et al. (1979), a multiple linear regression was used to analyze factors that affect the Performance of small and medium size business enterprises as follows:

\[
Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + U_i
\]

Where:
- \( Y \) = is the response or dependent variable - performance
- \( X_1 \) = Macroeconomic factors
- \( X_2 \) = working premises
- \( X_3 \) = technology
- \( X_4 \) = infrastructure
- \( X_5 \) = marketing
- \( X_6 \) = finance
- \( X_7 \) = management
- \( X_8 \) = entrepreneurial skills

\( \beta_0 \) is the intercept term - constant which would be equal to the mean if all slope coefficients are \( \beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \) and \( \beta_8 \) are the coefficients associated with each independent variable which measures the change in the mean value of \( Y \), per unit change in their respective independent variables. Accordingly, this statistical technique was applied to explain the following relationships. Regress performance (as dependent variable) on the selected linear combination of the independent variables using multiple regressions. Thus, the firm’s performance will be measured by the profitability of the firms. The dependent variable is the performance of the firm.

#### 3.5.3. Model Specification Tests

A test of the appropriateness of the model and the explanatory variables included in the model is critical step before analysis and drawing implications. Taking into account the varying nature of the cross-sectional data which will be used, multi-co linearity, heteroscedasticity, normality and indignity problems will be checked. The variables included will be tested for multicollinearity using Variance Inflation Factor (VIF). In addition, Breusch Pagan (BP) test will be used to test safety of heteroskedasticity.

**Multicollinearity Test**

Multicollinearity refers to a situation with a high correlation among the explanatory variables with in multiple regressions and it is a sample problem and a state of nature that results in relatively large
standard errors for the estimated regression coefficients, but not biased estimates (Andren, 2007). The data will be tested for multicollinearity. It is expected that no single explanatory variable should be a linear function of another. It can be investigated by calculating by variance inflation factor (VIF) for each of the explanatory variables. If a mean value of VIF are larger than 10; there is evidence of multicollinearity problem that calls for serious concern.

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finfact</td>
<td>1.18</td>
<td>0.848717</td>
</tr>
<tr>
<td>workexp</td>
<td>1.15</td>
<td>0.871128</td>
</tr>
<tr>
<td>Entprefact</td>
<td>1.14</td>
<td>0.880897</td>
</tr>
<tr>
<td>MgtFact</td>
<td>1.11</td>
<td>0.898818</td>
</tr>
<tr>
<td>Mktfact</td>
<td>1.09</td>
<td>0.913404</td>
</tr>
<tr>
<td>TecFact</td>
<td>1.09</td>
<td>0.920436</td>
</tr>
<tr>
<td>Macfact</td>
<td>1.06</td>
<td>0.944980</td>
</tr>
<tr>
<td>workprem</td>
<td>1.05</td>
<td>0.949903</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.11</td>
<td></td>
</tr>
</tbody>
</table>

**Heteroskedasticity Test**

Heteroskedasticity is a violation of one of the requirements of ordinary least squares (OLS) in which the error variance is not constant. The consequences of heteroscedasticity are that the estimated coefficients are unbiased but inefficient. Colin and Pravin (2009) showed that the maximum likelihood estimators of the regression model are inconsistent if there is heteroscedasticity problem. Heteroscedasticity is mainly prevalent in cross-sectional data set such as the one used in this study. Some of the main causes are: variance of dependent variable increase with increase in the level of dependent variable, variance of dependent variables increases or decreases with changes in independent variables and outliers in the data set. The first step in addressing the problem of heteroscedasticity is to determine whether or not heteroscedasticity actually exists. Therefore following the techniques mentioned by Andren (2007) to identify the problem of heteroscedasticity, the Breusch-Pagan is popular test procedure presented in most econometrics textbooks.

And it is slightly more general than the Goldfeld-Quant test, since it allows for the test the chi-square. Some of the methods used to correct for heteroskedasticity are transformation of data into natural logarithms, the Weighted Least Squares (WLS) and robustness of the weighted of standard errors (Gujarati, 2004). Andren (2007) illustrated the effects heteroskedasticity on estimates for various models and provided the robustness of the standard error of the estimators as the best remedial way of correcting heteroskedasticity.

Heteroscedasticity-robust methods are valid at least in large samples whether or not the errors have constant variance. So, variance matrix estimator should be robust in the presence of heteroskedasticy of unknown form (Wooldridge, 2000).

**Hettest**
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of performance.
chi2 (1) = 6.82
Prob > chi2 = 0.0090

**Normality Test**
The data were checked to verify that the assumption of multivariate normality was met. Brooks (2008) noted that in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled. The normality assumption is about the mean of the residuals is zero. According to
Gujarati (2004), in testing the normality assumption, three tests of normality could be considered: (1) histogram of residuals; (2) normal probability plot (NPP), a graphical device test. Tests for normality

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Pr(skweness)</th>
<th>Pr(kurtosis)</th>
<th>adjchi2(2)</th>
<th>Prob&gt;chi2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>87</td>
<td>0.8715</td>
<td>0.0372</td>
<td>4.40</td>
<td>0.1107</td>
</tr>
</tbody>
</table>

Source: Model output (2019).

If the underlying disturbances are not normally distributed, the estimator is inconsistent. And unifying treatment includes several distributions such as exponential, lognormal and Weibull (Greene 2003). One of the assumptions made in this study is performance error that is two-sided non-negative distribution of which is independent on error term that represents factors external to the respondents response and is assumed to be independently and identically distributed (iid) with zero mean and constant variance as \( N(0, \sigma^2) \). In order to confirm the assumed distribution, skewness/kurtosis test is one of used method in stata (Colin and Pravin, 2009). According to sketests, the joint chi-square was 4.40 with prob>chi2 equals 0.1107 at 10 percent level of confidence shown table 3.3 on table above. Since the prob>chi2 was 0.1107 which is greater than 10 percent level of confidence, the null hypothesis of normality in the distribution of error term is accepted and the researcher concluded that this was an indication of assumption that \( U_i \) is non-negative normal distribution at least 10 percent level of significance.

### 4. Data Processing, Analysis, Interpretation and Discussions

#### 4.1. Socio-demographic information of the participants

A total of 90 questionnaires were prepared to the samples. 87 completed the questionnaire. Therefore, the response rate was 96.6%. This response rate was excellent and conformed to Mugenda and Mugenda (2003) argument that for generalization of findings to the target population the least acceptable response rate should be 50%. A response rate of above 70% is excellent. Table 4.1 summarizes socio-demographic information of the participants. Majority of the respondents were males, indicating that majority of the SMEs in the study area were dominated by males. The average age of the respondents was found to be 38.4 years. The oldest respondent was 64 years of age and the youngest was 21 years old, with a standard deviation of 9.9 years.
All of the SMEs owners/managers had some form of education, and more than half of the respondents (52.87%) had a Degree. Leitao & Franco (2011) found that the performance of SMEs is positively affected by the high levels of education of the SME owners. SME owners that are highly educated are able to attain and develop skills to start up a new business and to sustain the business. Most of the respondents were the SMEs owner or both the manager and owner (55.2%). This is reflective of the fact that many SME owners perform many roles.

4.2. The results of Regressions Analysis

For the purposes of determining the extent to which the explanatory variables explain the variance in the explained variable, regression analysis was employed. The results of such analysis are narrated under.

Table 3. Regress performance on the selected variables using multiple regressions.

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Standard Error of the Estimate</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.561</td>
<td>.126</td>
<td>-.561</td>
<td>.126</td>
<td>-.004</td>
</tr>
<tr>
<td>Macro-economic (X1)</td>
<td>-.190</td>
<td>.061</td>
<td>-.190</td>
<td>.061</td>
<td>.003</td>
</tr>
<tr>
<td>Working premises (X2)</td>
<td>.334</td>
<td>.036</td>
<td>.334</td>
<td>.036</td>
<td>.000</td>
</tr>
<tr>
<td>Technological (X3)</td>
<td>.088</td>
<td>.026</td>
<td>.088</td>
<td>.026</td>
<td>.003</td>
</tr>
<tr>
<td>Infrastructure (X4)</td>
<td>.286</td>
<td>.034</td>
<td>.286</td>
<td>.034</td>
<td>.000</td>
</tr>
<tr>
<td>Marketing (X5)</td>
<td>.157</td>
<td>.028</td>
<td>.157</td>
<td>.028</td>
<td>.000</td>
</tr>
<tr>
<td>Finance (X6)</td>
<td>.400</td>
<td>.038</td>
<td>.400</td>
<td>.038</td>
<td>.000</td>
</tr>
<tr>
<td>Management (X7)</td>
<td>.102</td>
<td>.029</td>
<td>.102</td>
<td>.029</td>
<td>.000</td>
</tr>
<tr>
<td>Entrepreneurial (X8)</td>
<td>.186</td>
<td>.030</td>
<td>.186</td>
<td>.030</td>
<td>.003</td>
</tr>
</tbody>
</table>

Source: Model output, (2019), **P < .01
Predictors: (Constant), Entrepreneurial factors, Technological factors, Management factors, Macroeconomic factors, Financial factors, Infrastructural factors, Working premises, Marketing factors. Table 4.11 above displays the estimates of the multiple regression of performance against its variables for the samples of 87 respondents. Table 4.11 revealed that, the correlation between the observed value of performance and the optimal linear combination of the independent variables is 0.962, as indicated by multiple R. Besides, given the R Square value of 0.892 and adjusted R square value of 0.890, it may be realized that 89% of the variation in performance can be explained by the independent variables. The remaining 11% of the variance is explained by other variables not included in this study. The unstandardized coefficients B column, gives us the coefficients of the independent variables in the regression equation including all the predictor variables as indicated below: Predicted performance score = -.561 (Macroeconomic) +.334(working premises) +.088 (technological) +.286 (infrastructures) +.157 (marketing) +.400 (finance) +.102 (management) +.186 (entrepreneurial). Table 4.11 further shows that, all the explanatory variables included in this study can significantly explain at 99% confidence level to the variation on the dependent variable. The standardized beta coefficient column shows the contribution that an individual variable makes to the model. The beta weight is the average amount the dependent variable increases when the independent variable increases by one standard deviation (all other independent variables are held constant). As these are standardized we can compare them. Thus, the largest influence on the performance of SMEs is from the financial factor (.400) and the next is working premises (.334). On the other hand technology with the beta value of .088 and management with the beta value of .102 are the poorest predictors of performance when they are compared with the other explanatory variables under study. Finally the macroeconomic factors affect the performance negatively. This is because of according to the response of respondents there is high unemployment, inflation and shortage of foreign currency in the study area. Macroeconomic variables like inflation results in the increase of expenses which again reduces the profits of SMEs and diverts investment to ensure the growth and success of the business. Inflation not only affects SMEs, but also their consumers, as it increases the costs of goods and decreases their disposable income (Cant & Wiid, 2013).

5. Conclusions and Recommendations
5.1 Conclusions of the Findings

The main sources of finance for startup and expansion of most SMEs in Yeka Sub-City was from personal savings which accounted for 39% and the second major sources of finance was Informal sources, which comprised of 38% (i.e. Iqub, Family, Friends/Relatives). The formal financial institutions were only 21%, this was mainly because the formal institutions have difficult application procedures, collateral requirement and high interest rate. Therefore there observed poor institutional frame work that lead to a big gap in the accessibility to finance. According to the ILO (2000) report, institutional frameworks determine effectiveness and efficiency of key business infrastructures such as, microfinance institutions, Poor institutions in general, lead to higher transaction costs.

The study revealed that more than half (69.01%) of the respondents viewed managerial competency and skills shortage as a factor that affects the performance of the business. This finding is supported by the Hisrich & Dmovsek (2002).

Among the marketing factors that affected the performance of enterprises: based on findings were inadequate market, difficulty of searching new market, Poor quality product for the market, Lack of establishing a market network and lack of market information, the respondents were agreed that these factors are important in affecting the performance of enterprises. Majority of the SME respondents (more than 90%) to the survey reveal that the strength of the dollar, inflation rate and interest rate all affect the business performance.

As revealed by the study majorities of the SME owners/managers (90.5%) believe that technological advancement will improve performance. This result is supported by studies carried out by Levey &Powell (2000). The authors stated that application of technology adoption of IT will assist an organization in storing information, as well as communicating with customer, suppliers and business partner who will facilitate...
business transaction, and enhance the overall performance of SMEs, leading to a better performance in reducing the operating expenses as a whole (Levey&Powell,2000).

From the interview conducted it was also understood that almost all enterprises didn’t have their Owen work place, they used a rented house ,they are paying high price, a continuous price increment on the house rent forced to frequently change working places this in turn destabilize the working condition. It can be concluded that the majority of enterprises don’t have their Owen working places, though the factor is a problem of all sectors

Accessibility to finance is a major factor affecting the growth and success of SMEs, which can be attributed to many factors (Haron et al., 2013). More than two-thirds (76.58%) of the SME owner/manager believe that access to finance is a major challenge affecting the growth of business.

The Multiple Regression analysis result showed that the Beta weight largest influence on the performance of SMEs is from the Financial factor(0.400) ,Working premises factor (.334) and at the third place from infrastructure factors (.286),this is the average amount the dependent variable increases when the independent variable increases by one standard deviation (all other independent variables are held constant). Macroeconomic factors affects the performance negatively. This is because of according to the response of respondents there is high unemployment, inflation and shortage of foreign currency in the study area. Macroeconomic variables like inflation results in the increase of expenses which again reduces the profits of SMEs and diverts investment to ensure the growth and success of the business. Inflation not only affects SMEs, but also their consumers, as it increases the costs of goods and decreases their disposable income (Cant & Wiid, 2013).

5.2. Recommendations

Formal financial institutions like banks and micro finances institutions should improve access to finance through offering a better lending terms and conditions and government to establish centrally managed marketing sites that will equally give access to market in order to improve performance of SMEs in Addis Ababa.

a. To be able to confront competition, collaboration between SMEs can be considered. By entering into joint ventures, the opportunity to combine strengths, information and technological capabilities to increase sales or to enhance their customer base.

b. SMEs need to continuously evaluate the Environment that they operate in, understanding their competitors and their offerings/service. SME competitiveness depends largely on the speed with which new products can be brought to the market place.

c. SMEs in Yeka sub-city to be able to confront competition from local and foreign competitors, from developed and emerging economies, need to look into the opportunities these economies will provide.

d. Future researches could perform an in-depth study on the internal and external factors competition, addressing the impact on the performance of SMEs

6. REFERENCES


(2003).

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