

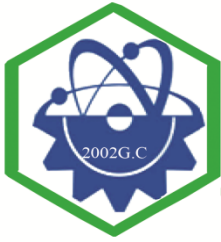
**Infolink College**

Advancing Quality Education and Research

# **The First National Research Conference on Quality Research for Sustainable Development**



**June, 2019**



**Infolink College**

Advancing Quality Education and Research

# The First National Research Conference on Quality Research for Sustainable Development

Organized by office of Research and  
Community service

**June, 2019**

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## **Opening Speech**



**Mr. Dereje Tekalign, President of Infolink College**

*Your Excellency Mr. Sintayehu Zeleke, Vice President for Academic Affairs and Research*

*Your Excellency Dr. Teshome Gudissa*

*Your Excellency, Professor Ongaye Oda, our Key note Speaker*

*Our Dear Guests*

*Ladies and gentlemen!*

As a person who has been working in the sector of education for the last 17 years, I strongly believe that Ethiopia needs quality higher education in order to effectively and efficiently utilize its untapped human and natural resources. Higher education institutions are engines that will provide citizens with necessary knowledge and skills. It is also obvious that higher education

institutions are the pivotal of research and innovation of every growing economy. However, ensuring quality higher education and research in the country calls for the joint effort of both private and public sectors.

Even though Ethiopian higher education experienced tremendous increases in student enrollment, research and innovation is at its infant stage. When I specifically talk about private colleges and universities in Ethiopia, they are challenged by factors like poor quality research staffs, lack of transformative leaders, very poor research culture, and lack of strong support from government and lack of finance.

With all these challenges, I am optimistic that Ethiopian private higher education institutions will have their own part to play and gap to fill in the development process of this country. Taking this reality in to consideration, the key stake holders especially the government must channel resources and give its technical support to enhance the capacity of private colleges and universities on top of the support delivering for public institutions.

Recently, Info link College has been taking some serious measures to promote research activities in addition to its main mission-quality teaching and learning. Some of the developments were:

- ✓ The establishment of the office of research and development and the appointment professionals who can carry out the job
- ✓ the finalization of curriculum review of need driven post graduate programs that can scale up research activities at the college
- ✓ Assigning budget for activities related to research and community services activities
- ✓ providing training and creating sensitization program for staffs to institutionalize research culture

Dear Guests, Ladies and Gentlemen,

My final message is that for meaningful and visible impact in research and quality education, Info Link College is highly committed to invest in facilities and infrastructure, leadership and management, innovations and other necessary issues.

This first national conference on theme Quality **Research for Sustainable Development** is part of our long plan to advance quality research and education at Info Link College.

As a founder and top manager of this Institution, I am so eager and happy to serve my country by investing in Education in an ethical manner. I and my colleagues at the college are highly committed to advance quality education and research. Please join us!! *I wish you very successful research conference at Infolink College and I want to announce that the first national research conference on theme quality research for sustainable development is officially opened.*

### **Welcome Speech**



### **Dr. Teshome Gudissa**

Your Excellency Mr. Dereje Tekalign, President of Infolink College

Your Excellency Mr. Sintayehu Zeleke, Vice President for Academic Affairs and Research

His Excellency, Professor Ongaye Oda, our Key note Speaker

Our Dear Guests

Ladies and gentlemen!!

I am honored to have this opportunity to make speech or share my experience regarding the value of research for sustainable development. It is surely no accident that many of the states

which lapse into deadly conflict these days have high levels of poverty and an inequitable distribution of wealth; governance which is neither inclusive nor responsive which does not reach all corners of the land; and an absence of the rule of law. Such development problems cannot be addressed over night, but addressed through problem solving research and by promoting problem solving technology.

Research has the power to do the following:

- ✓ Build knowledge and facilitate learning
- ✓ Means to understand various issues and increase public awareness
- ✓ An Aid to business success
- ✓ A way to prove lies and to support truth
- ✓ Means to seize opportunities
- ✓ A seed to love reading, writing, analyzing and sharing valuable information
- ✓ Nourishment and exercise for the mind and generally research is a means for sustainable development.

Today in Ethiopia, we are at stage where people are so sensitive and need development which is fully inclusive. Example: Women want gender-sensitive development. Youth want to be engaged. Older people have views on how their needs should be met. Rural people want infrastructure and services to reach them. Indigenous people want their status fully acknowledged and respected. From this, we can learn the lesson that development cannot be about planning from on high without regard to the views and perspectives of those whom policies and programs aspire to reach. Thus, all development related activities and challenges associated with it need scientific thinking, research and technology, and capable professional and researchers who think scientifically. This implies that the higher education institutions of Ethiopia, both public and private have many tasks and assignments to accomplish to help this country move forward.

## **Ladies and Gentleman,**

For me, research activities in Ethiopian higher education Institutions be it public or private should include:

- Support for national leadership and ownership. A commitment to building national capacities.
- Acting to reduce inequalities significantly, and to build tolerance between peoples. The aim should be to strengthen social cohesion to reduce the risk of tensions boiling over into conflict.
- Support for building governance which is inclusive and responsive, allows for civic space, and helps develop the institutions and capacities needed to prevent descent into conflict.
- Diversifying economies as one or two commodity economy is highly vulnerable to a range of shocks. Investments in skills and infrastructure, having a positive enabling environment for investment in new sectors, and developing climate-resilient livelihoods are critical.

For many People in Private Higher Education Institutions, education is just about money, important as that is. But, truly speaking, education is all about solidarity, the exchange of knowledge and best practice, and support for the acquisition of technology and building the capacity to innovate and breakthrough in research. Unlike others, I am very optimistic that with good enabling environments in place, the private higher education institutions can play a very constructive role through investment in quality education and research to bring about inclusive and sustainable growth.

Taking this opportunity, please allow me to thank the founding father and the president of Info link College, Mr. Dereje Tekalign and other key stakeholders for taking some serious measures to promote research activities in addition to its main mission-quality teaching and learning. In all my informal talk with him, I recognized that he wanted to sacrifice himself for research, innovation and technology. He became a fan of the principle of **publish or perish**, which is the golden principle of academia. With his great effort, some partnerships with abroad universities are happening. Example: collaboration with VIU. Today we do have this very small gathering in the name of research at Infolink College. But, I have a dream that after two or three years we will organize an international conference with some 100,000 researchers and practitioners coming from all over the world in a very beautiful conference room somewhere in Ethiopia or abroad. Why not? I feel proud when I work as a part timer at Infolink College with visionary people like this in addition to my formal work in public institution. Where ever we are, we are building the same hut as we are building a nation which we call our mother.

Have a very wonderful research conference!!!

Thank you



# Part Two: Research Papers

# **The Relationship between Financial Performance and CAMEL Rating of Commercial Banks in Ethiopia**

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## **Abstract**

*Banking sector is the key element in the financial sector and determines development of any country's economic success. This paper aimed to analyse the financial performance of Ethiopian commercial banks by using CAMEL framework and to rank the banks according to their performance. Census sampling methods were used and 15 banks were considered for the study. For measuring performance of the banks data was collected from National Bank of Ethiopia for the period of 2012 to 2017 and ROA and ROE are considered as dependent variables and, Capital adequacy, Asset quality, Management efficiency, Earning ratio and Liquidity ratio were considered as independent variables. Descriptive analysis was conducted by using ratio analysis and econometric analyses were conducted by constructing regression model by using e-views 9 software. The regression result for ROA is explained by independent variables is 62.11 percent, and ROE is explained by independent variables is 82 percent. Capital adequacy, asset quality, management efficiency are significant variables whereas the earning ability and the liquidity position ratios are insignificant in both models.*

**Key words:** *Financial performance, CAMEL approach, Commercial Banks in Ethiopia.*

## **Introduction**

Financial sector is the backbone of the economy of any country. It works as a facilitator for achieving sustained economic growth through providing efficient monetary intermediation. A strong financial system promotes investment by financing productive business opportunities, mobilizing savings, efficiently allocating resources and makes easy the trade of goods and services. Like most of developing countries around the world the financial sector in Ethiopia is still under developed and requires a huge attention. In Ethiopia the financial sector encompasses banks, insurance companies and micro-finance institutions.

Banking sector is the key element in the financial sector and determines development of any country's economic success. Bank is a financial intermediary that accepts deposit and channels those deposit in to lending activities. As it is observed from the day today activities and understands from the activities of the bank, today bank plays the interesting financial, investment, asset management, fund mobilization, capital appreciation, and some other general and agency services. The development of the Ethiopian banking industry is at a slower pace when considering the years of the banking industry needs examining the performance of commercial banks become very crucial for their profitable survival.

Financial analysis is the structural and logical way to present the overall financial performance of financial institutions (Aminul, 2014). It helps to evaluate and decision making for business operation. There are different techniques for analyzing financial performance in the bank supervision. The goal in analyzing financial statements is to assess past performance and current financial position and to make predictions about the future performance of a company's profitability and their prospects for earning a return on their investment by receiving dividends and/or increasing the market value of their stock holdings. Creditors and investors who buy debt securities, such as bonds, are more interested in liquidity and solvency; the company's short and long run ability to pay its debts. In financial analysis process the comparative analysis, trend analysis, common size analysis, fund flow analysis & cash flow analysis and ratio analysis are the common tools of analyzing the financial statement of the given company (Ehrhardt & Brigham, 2011).

One of the modern and effective tools for analysis of financial statement analysis is CAMEL rating system. All the banks may be ranked on each of the sub parameter of major parameter (Capital adequacy, Asset quality, Management quality, Earning quality, Liquidity). These sub parameter ranks are combined either by simple average or weighted average. After obtaining the ranks for each major parameter, these are aggregated using the same method as mentioned above (Reddy, 2012).

### **Statement of the problem:**

Like most of developing countries around the world the financial sector in Ethiopia is still under developing and requires a huge attention. The development of the banking industry (which is part of the financial institution) is at a slower pace when considering the years of the banking industry. Most of the industries in developing countries are characterized by weak administration, weak resources mobilization capacity and are also faced with other social and economic problems. Examining the performance of commercial banks become very crucial for their profitable survival. There are lots of researches carried out global, regional and local level regarding to the application of CAMEL model for financial performance analysis. Thus, from this view, the researcher adopted the CAMEL model for analyzing the financial performance of the banks in Ethiopia. The researcher addressed the gaps of the previous researches. Addressing the newly established banks to assess their rank in composite rate of CAMEL measures, measuring the composite rate of commercial banks considered in the bank for the year of 2015, 2016 and 2017 and evaluated consistency of the financial performance among commercial banks considered and addressed in the study with the following research questions and objectives of the study.

### **Research questions**

- What is the relative impact of measures of CAMEL rating on the financial performance?
- What is the financial performance of Ethiopian commercial banking over the period of 2012-2017 with comparison of performance of earliest period?
- What are the relative ranks of Ethiopian commercial banks during the period 2012-2017?

### **Objectives of the study**

- To evaluate the financial performance of Ethiopian commercial banks by using CAMEL frame work
- To compare and rank the financial performance of Ethiopian commercial banks for the period of 2012-2017
- To offer suggestive measures to improve the performance of commercial banking sector in Ethiopia on the basis of financial analysis.

### **Hypothesis of the study**

Based on the objectives, the present study examined the following hypotheses:

- HO1: There is no significant relationship between capital adequacy ratios and Performance of the commercial banks in Ethiopia.
- HO2: There is no significant relationship between asset quality ratios and performance of the commercial banks in Ethiopia.
- HO3: There is no significant relationship between management efficiency ratios and performance of the commercial banks in Ethiopia.
- HO4: There is no significant relationship between earning ability ratios and performance commercial banks in Ethiopia
- HO5: There is no significant relationship between liquidity ratios and performance of commercial banks in Ethiopia

### **Significance of the Study**

As supported by many researchers, banking sector is the back bone of the country`s economy. And thus any study that will be investigating on the bank performance or operation problem will have some indicators on how is the economy. Based on the finding the remedy can be taken to have incremental banking sector performance. In line with the above facts, it is hoped that the results of this study will;

Provide the information for existed investors, potential investors, creditors and other clients in order to assess the earning ability, the prospects of cash flow, the liquidity and solvency degree, the amount of net profit and some other information which will be the input for their respective decision.

Give chance the managers and board of directors of each banks to see how their banks are being competitor in the banking industry of Ethiopia and what should be continue (strength) and what

should be overcome (weakness) in order to stay in the competitive market of the banking industry. Suggest the possible recommendation for banking supervisor authority in order to have healthy competition among those banks to keep the welfare of the country's economic health. Furthermore, the result of the study is hoped to serve as a base for further research that address the financial performance of the banking industry in Ethiopia.

### **Scope of the Study**

The research was delimited to fifteen banks from the total population of 17 commercial banks in Ethiopia. Conceptually, the research was delimited in analyzing the financial performance of those banks by applying the element of CAMEL model and regression the elements of CAMEL model for the ROA and ROE. Timely, the research was delimited to the period of 2012 to 2017.

### **Research methodology**

The study employs both descriptive and econometric methodology to analyze the financial performance of Ethiopian commercial banks. The descriptive financial analysis employed to describe measure, compare and classify the financial performance of Ethiopian Commercial Banks. The econometric model employed to estimate the relationship between financial performance and underlying explanatory variables. The Profitability ratios (ROA & ROE) are modeled as a function of capital adequacy, asset quality, management, and earning and liquidity ratios. In addition, the econometric model will also be used to test the validity of the hypothesis formulated previously.

The study takes the whole population of commercial banks registered by National bank of Ethiopia and currently under operation in the country. At present, one government owned and seventeen private banks are operating throughout the country. However, the population size is reduced to fifteen banks because data for the period 2012-2016 is not available from the newly established private banks (Enat Bank established in 2013 and Debu Global Bank established in 2012). Timely, due to the availability, the near recent year was delimited to 2016 by starting from 2012, since it is difficult to access the financial statements of all listed banks for the year of 2017.

As the study is intended to examine the financial performance of commercial banks, it is reasonably sufficient to make use of secondary data since they adequately capture past financial performance of the commercial banks under consideration. The secondary sources of data

included the records of National Bank of Ethiopia, annual reports, audited financial statements, articles, previous studies, and published articles of the researchers and scholars.

The ratios used for the CAMEL parameters are calculated based on the annual reports of the individual commercial banks. The calculation was done separately for each of the parameters and the ratios related to each parameter are taken on an average over the five-year period (2012-2016) for each commercial bank at head office level. The average values were used to rank the commercial banks. Higher average value of the ratios got ranked higher. In case of equal average ratio, the same rank was assigned to the commercial bank. All the average ratios having higher value got higher rank except for ratios of total loans to total capital, debt to equity, total investments to total assets, total interest expenses to total deposit that are ranked in reverse order. Lower rank was assigned to higher ratios under the four ratios. The averages of all the parameters' rankings are used for the final ranking of the banks.

Present research employed different statistical tests like Test for Heteroscedasticity (Breusch-Pagan-Godfrey test), Test for Auto correlation, Test for Normality and Test for Multicollinearity. Further the collectable panel data was analyzed by using descriptive statistics, correlations, and linear regression analysis. Mean values and standard deviations used to analyze the general trends of the data from 2012 to 2017. A multiple linear regressions model and t-static were used to determine the relative importance of each independent variable in influencing profitability. The study was conducted by regression analysis using E-views econometric software package, to test the casual relationship between the firms' profitability and five determinant factors, elements of CAMEL model.

## **Findings of the study**

### **Ranking of Banks by ROA**

The Return on Assets (ROA) is financial ratio used to measure the relationship of earnings to total assets. ROA is regarded as the best and widely used indicator of earnings and profitability. ROA assesses how efficiently a bank is managing its revenues and expenses and it is also a tool that measures how a particular management of a bank is efficient enough to generate profit using available financial data and real assets. It shows how efficiently the resources of the company are used to generate the income. It is calculated by dividing the net profits with total assets of the bank. High ratio reflects better earning potential of a bank in the future.

Table 1 presents ROA of 15 Ethiopian commercial banks during 2012 -2017. LIB, BIB and ZB are ranked to the first three ranks scoring good result, whereas OIB, AB and BOA are ranked to the last three stages by scoring the lowest ROA from other commercial banking in the industry.

### **Ranking of Banks by ROE**

The Return on Equity (ROE) is financial ratio used to measure the relationship between earnings to total equity. ROE is regarded as the best and widely used indicator of earnings and profitability from the equity financing. It shows how efficiently the wealth of shareholder or the equity of the banks is used to generate the income. It is calculated by dividing the net profits with total equity of the bank. High ratio reflects better earning potential of a bank in the future.

Table 2 presents ROE for 15 Ethiopian commercial banks during 2012-2017. CBE, DB and WB are the three prominent banks in scoring good level of ROE, whereas, AB, ADIB and NIB score the last three ranks for their ROE.

### **Ranking by Composite Capital Adequacy**

The group ranking is based on the average of individual bank's capital adequacy sub-parameter ranks. As it is evident from the Table 3, ADIB has the highest capital adequacy ratio and ranked first. ADIB is followed by AIB, BOA, and WB occupying the second, third, and fourth position respectively. The last position is occupied by CBE.

### **Rankings by Composite Asset Quality**

The group ranking is based on the average of individual bank's asset quality sub-parameter ranks. Table 4 presents the average loan to assets and investment to asset ratio by type of banks and the rank position of the banks. CBO has the highest capital adequacy ratio and ranked first. CBO is followed by DB, ADIB, and AIB occupying the second, third, and fourth position respectively. The last position is occupied by BOA.

### **Rankings by Composite Management Efficiency**

The group ranking is based on the average of individual bank's management capability sub-parameter ranks. Table 5 presents the management capability ratios by type of banks and the rank position of the banks. The CBE has the highest capital adequacy ratio and ranked first. CBE is followed by DB, ZB, and LIB occupying the second, third, and fourth position respectively. The last position is occupied by AB.

### **Ranking by Composite Earning Ability Ratio**

The group ranking is based on the average of individual bank's earning quality sub-parameter ranks. Table 6 presents the earning quality ratios by type of banks and the rank position of the banks. CBE has the highest capital adequacy ratio and ranked first. CBE is followed by NIB, UB, and BOA occupying the second, third, and fourth position respectively. The last position is occupied by ZB.

### **Rankings by Composite Liquidity Ratios**

The group ranking is based on the average of individual bank's Liquidity quality sub-parameter ranks. Table 7 presents the liquidity ratios by type of banks and the rank position of the banks. ADIB has the highest capital adequacy ratio and ranked first. ADIB is followed by BIB, AB, and CBO occupying the second, third, and fourth position respectively. The last position is occupied by CBE.

### **Descriptive Statistics of Variables**

In this section descriptive statistics for the dependent variable; Return on Asset (ROA) and Return on Equity (ROE) and explanatory variables involved in the regression model and camel Model are presented. Mean, maximum, minimum and standard deviation values are included in the table below. These figures give overall description about data used in the models.

The average return on equity per Birr investment in the commercial banks of Ethiopia is 21.73 percent whereas the average return per unit of asset employed in the banks is 2.82 percent.

The mean independent variable Capital adequacy, Asset quality, Management efficiency, Earning and liquidity ratios have positive values with the amount of 14.92, 2.11, 45.59, 7.56 and 60.02 respectively. When we see the standard deviation value of the independent variable data set management efficiency and liquidity ratio is more variable than the other independent variables having value 11.47 and 7.94 respectively. This can be more understandable by looking the gap between the maximum and minimum value of the management efficiency and liquidity ratio. The maximum value in the data set of management efficiency ratio and liquidity ratio is 75.33 and 89.11 whereas the minimum value is 19.86 and 42.95 percent respectively.

The mean value of capital adequacy ratio of commercial banks of Ethiopia as measured by total capital to total asset is 14.92 percent. The maximum capital maintained in the data set of the

bank is 38.06 percent whereas the minimum capital maintained in the banks during the period is 4.37 percent.

The mean value of Asset Quality ratio as measured by the ratio of provision for loan loss to total loan in the data set is 2.11 percent. The maximum provision maintained in the data set 7.83 percent and the minimum 1.03 percent of the total loan amount of the banks during the six year period. The standard deviation of the asset Quality 1.01 which is the lowest among the independent variable this shows there is low variability in the data of asset quality ratio.

In this study the management efficiency of the Commercial Banks of Ethiopia measured by the ratio of Non-Interest Expense to Net Interest Income and noninterest income during the six year on average is 45.59 percent. The maximum spending ratio in the data set 75.33 whereas the minimum was 19.86 percent. This gap is also reflected on the value of standard deviation of the management ratio i.e. 11.47 percent which is the highest variability than the other independent variables.

Earning calculated by the ratio of Net Interest Income to total loan and advance during the six year period is worth at the mean earning of the commercial banks of Ethiopia is 7.56 percent. The maximum earning during the period was 10.19 percent and the minimum earning was 3.26 percent. There is low or no variation between the earning of the banks as it measured by standard deviation with the value 1.42.

The last independent variable is liquidity this is measured by the ratio of total loan to total deposit. The mean value of the data set of liquidity is 60.02 percent. The maximum value in this data is 89.11 and the minimum value is 42.95. This reveals that on average 60.02 percent of commercial banks deposit is converted in to the loan and the remaining balance helps to maintain the liquidity position of the banks.

### **Correlation Analysis between Return on Asset and Explanatory variables**

The ROA reflects the ability of a bank's management to generate profits from the bank's assets and this profitability measure is correlated with other explanatory variables either positively or negatively. In table 9, the correlation analysis was undertaken between profitability measure; return on asset and explanatory variables; capital adequacy, asset quality, managerial efficiency and liquidity.

As it is depicted above in the table 9, capital adequacy, asset quality and liquidity ratios are positively related with the ROA with less correlation coefficient value, 0.197, 0.0306, and 0.038.

This correlation result means that even if the value is less, the return on asset performance is increased when the capital adequacy, asset quality and liquidity ratios are increased. The current result show dispersion from other researchers; according to Muluaem (2015), the asset quality and earning ability ratios are directly related with ROA. But in this research, the earning ability ratios are negatively related to the ROA.

The correlation coefficient of return on asset and management efficiency and earnings ratios are negatively within less significantly. According to Muluaem (2015), the capital adequacy is negatively correlated and earnings ratios are positively related with the ROA. In the asset qualities and management efficiency the finding is consistent with Muluaem (2015).

### **Correlation Analysis between Return on Equity and Explanatory Variables**

Return on Equity (ROE), the net income per birr of equity capital, which is more concerned about how much the bank owners is earning on their equity investment. The correlation analysis was done between profitability measures; return on equity and explanatory variables; capital adequacy, asset quality, managerial efficiency, earning ability and liquidity.

As per the table 10, the correlation coefficient between return on equity and capital adequacy ratio is -0.60 which means the capital adequacy of the commercial banks has high negative relation with Return on equity followed by management efficiency with the coefficient value of -0.59. When the Capital adequacy ratio as measured by the ratio of total capital to total asset increases the return on equity ratio decreases and vice versa.

The Correlation coefficient between return on equity and asset quality of commercial banks is -0.17 it indicates that the increase in asset quality will result in the decrease the ratio of return on equity. This finding is consistent with Muluaem (2015). The direction of the correlation for capital adequacy and asset quality is the same with the finding of Muluaem (2015). For management efficiency the level of correlation and the type of relationship is not the same with the finding of Muluaem (2015), since the finding of Muluaem (2015), revealed that there is direct relationship between asset quality and return on asset. Management efficiency is the second most negatively related with ROE from other respective independent variable next to capital adequacy. If the management efficiency is good in declining the non-interest expense in relation to total income, the return on equity will be decline. This is clear that, if managements

are worried about reducing the non-interest expense, they couldn't enjoy different agency service and general service, in turn it reduce the total income that can be generated by the banks. Thus total return on equity will be decline.

The correlation coefficient between return on equity and earnings ratio of the bank is 0.14 this shows there is a weak positive relation between the two variables. Even if the relation is weak, it seems expected that as the earning ability is measured by net interest income to total interest income, to score high there should be high net interest income which is the difference of the total interest income to total interest expense, thus the higher ratio for earning means there is high net interest income which is the part of total income. If total income is high, definitely, there would be high return on equity.

Whereas the correlation coefficient between return on equity and liquidity ratio is -0.387 which indicate there is a low negative relation. This can supported with the concept of, if the total loan offered related to total deposit is less, the more income could not be generated, if so, the return on equity will decline. Thus there is tradeoff between liquidity ratios desired level and return on asset. For all four independent variables (remaining to asset quality), the current finding is consistent with the previous research result (Muluaem, 2015).

### **Tests for Heteroscedasticity**

The homoscedasticity is one of the assumptions of the CLRM which states that the variance of the errors must be constant. If the errors do not have a constant variance, they are said to be heteroskedastic (Brooks, 2008). As noted in (Brooks, 2008) Homoscedasticity fails whenever the variance of the unobservable changes across different segments of the population, which are determined by the different values of the explanatory variables. The Breusch-Pagan-Godfrey test for heteroscedasticity was used to test the presence of the heteroscedasticity.

Both the F-statistic and Chi-Square versions of the test statistic gave the same conclusion that there is no evidence for the presence of heteroscedasticity on both ROA and ROE, since the p-values were in excess of 0.05.

### **Test for Autocorrelation**

The Durbin Watson test reports as a test statistic, with a value from 0 to 4, where

1. If the value is 2, there is no autocorrelations

2. If the value is between 0 to less than 2, there is positive autocorrelation
3. If the value is in between greater than 2 and less than 4, there is negative autocorrelation.

But according to the rule of thumb, the Durbin Watson test value in between 1.5 and 2.5 shows a relative normal data or it depicts as there is no autocorrelation. Or on the other hand, there is no any evidence to reject the null hypothesis which state as there is no autocorrelation between data.

The Durbin-Watson test statistic of 2.028743 and 1.873686 is clearly between the upper limit (dU) which is 1.5 and the critical value of 4- dU i.e. 2.5 and thus the null hypothesis of no autocorrelation is within the non- rejection region of the number line and thus there is no evidence for the presence of autocorrelation.

### **Test for Normality**

Test for normality require checking whether the disturbances are normally distributed or not. According to Brooks (2008), 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. If the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. This means that the p-value given at the bottom of the normality test screen should be bigger than 0.05 to not reject the null of normality at the 5% level.

Brooks (2008), noted that the Jarque-Bera statistic will not be significant for disturbance to be normally distributed around the mean. The hypothesis for the normality test was formulated as follow:

H0: Error term is normally distributed

H1: Error term is not normally distributed

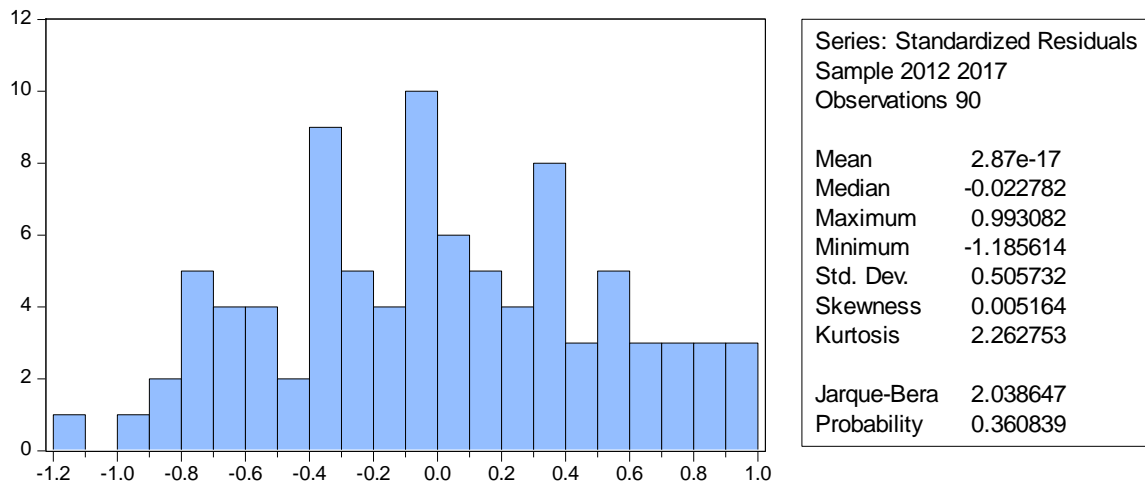
$$\alpha = 0.05$$

Decision Rule:

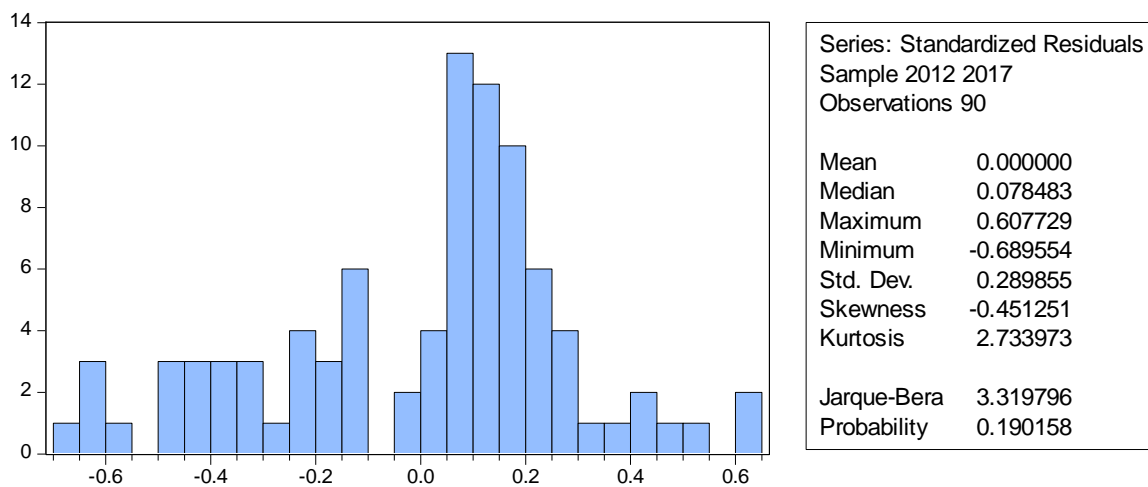
Reject H0 if P value of JB less than significant level 0.05. Otherwise, do not reject H0.

As you can see from the normality test result, the Jarque-Bera shows a probability of 0.36 for return on asset and a probability of 0.19 for return on equity. The result suggests that data used for the model construction is normal i.e. meets the property of normal distribution. Thus the null hypothesis which state as the error term is normally distributed at 5% level of significance. There is no ground to reject the null hypothesis as it can be depicted in the below two graphs.

**Graph 1 Normality Test for the Residuals of Return on Asset**



**Graph 2 Normality Test for the Residuals of Return on Equity**



**Test for Multicollinearity**

Multicollinearity means the existence of a “perfect” or exact, linear relationship among some or all explanatory variables (Gujarati D 2004). As noted in (Gujarati D 2004) if multicollinearity is perfect, the regression coefficients of the explanatory variables are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, the regression coefficients, although determinate, possess large standard errors (in relation to the coefficients themselves), which means the coefficients cannot be estimated with great precision or accuracy.

A correlation matrix used to ensure the correlation between explanatory variables. Cooper & Schindler (2009) suggested that a correlation coefficient above 0.8 between explanatory

variables should be corrected for because it is a sign for multicollinearity problem. Malhotra (2007) argued that the correlation coefficient can be 0.75. Lastly, Hair et al. (2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem.

Table 13 presents all the correlation coefficient values are less than 0.9; even they are less than 0.75; suggesting that there is no problem of multicollinearity. In this study the highest correlation coefficient is 0.495755 between liquidity ratios and capital adequacy. Thus, it can be concluded using the rule of (Kennedy , 2008) the all variables have low correlation power which implies no multicollinearity problem in the explanatory variables selected to financial performance of the commercial banks.

### **Regression Analysis between Return on Asset and Explanatory Variables**

To examine the relationship between profitability measures and explanatory variables two regression analysis were run. The first regression analysis was undertaken to investigate the relationship between Return on asset and independent variable.

The regression Analysis result (Table 14) shows R-squared statistics and adjusted R squared statistics value of 70.0426% and 62.1173% respectively. The result indicates that the change in the independent variable explain 62.1173% of the change in the dependent variable. That is capital Adequacy, Asset Quality, Management efficiency, Earning and liquidity collectively explains 62.1173% of ROA.

The remaining 37.8827% of change was explained by other factors which are not included in the model. Thus these five variables used in the CAMEL framework are good explanatory variables of ROA of the commercial Banks in Ethiopia. The null hypothesis of F- statistics (the Overall test of Significance) that R<sup>2</sup> is equal to zero was rejected at 1% as the p-value was sufficiently low value of 0.000000; suggesting a strong level of significance, which enhances the reliability and validity of the model.

$$\text{ROA} = 5.62 + 0.32 \text{ CA} - 0.06 \text{ AQ} - 0.396 \text{ ME} + 0.000465 \text{ ER} + 0.64 \text{ LP} \dots (1)$$

As the above regression table displays; the first three variables are significantly affecting the financial performance of the commercial banks in Ethiopia, they are capital adequacy significant at 10% significance level, asset quality significant at 5% level of confidence and the remaining management efficiency absolutely significant factor for the current financial performance.

The current finding shows that except the capital adequacy all variables are significant factor for the performance of ROA. The remaining two components; earnings ratios and liquidity ratios are

insignificant since they are with the probabilities 88.50% and 63.32%. According to Mulualem (2015), except capital adequacy all were reported as the significant factors. According to Ermiyas (2016), except the liquidity ratios all are significant factors. This finding is also supported by Dawit (2016). But currently, beyond the liquidity position the earnings ratios is also becoming as insignificant factor.

Based on the result of Table 4.30 the coefficient of asset quality, management efficiency and liquidity ratios against ROA were negative -0.69, -0.039 and -0.24 respectively. This indicates that there was an inverse relationship between the aforementioned three independent variables and ROA and statistically significant for asset quality, management efficiency and liquidity ratios.

On the other hand capital adequacy and earnings ratio had a positive relationship with ROA 0.32 and 0.00046 respectively. This reveals that there is a direct relationship between the above independent variable and ROE and statistically significant for capital adequacy but not for earnings ratios. The current finding for the significance level of the first two variables; AQ and ME is fit with the finding of Mulualem (2015). The insignificance level of the liquidity ratio of this research finding is supported by Ermiyas (2016) and Dawit (2016).

### **Hypothesis Testing for ROA model**

Ho1: There is no significant relationship between capital adequacy ratios and Performance of the commercial banks in Ethiopia measured by return on asset. As the regression result shows there is significant statistical relationship between capital adequacy and profitability of Ethiopian commercial banks measured by return on asset with the significance level of 7.64 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between capital adequacy and return on asset.

Ho2: There is no significant relationship between asset quality ratios and Performance of the commercial banks in Ethiopia measured by return on asset. As the regression result shows there is significant statistical relationship between asset quality and profitability of Ethiopian commercial banks measured by return on asset with the significant level of 1.28 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between asset quality and return on asset.

Ho3: There is no significant relationship between management efficiency ratios and Performance of the commercial banks in Ethiopia measured by return on asset. As the regression result shows there is significant statistical relationship between management efficiency and profitability of Ethiopian commercial banks measured by return on asset with the significance level of 0.00 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between management efficiency and return on asset.

Ho4: There is no significant relationship between earning ability ratios and Performance of the commercial banks in Ethiopia measured by return on asset. As the regression result shows there is not significant statistical relationship between earning ability ratios and profitability of Ethiopian commercial banks measured by return on asset since the significance level is 88.50 percent. Thus the null hypothesis is failed rejected and the alternative hypothesis is not accepted. This means there is not statistically significance relationship between earning ability and return on asset.

Ho5: There is no significant relationship between liquidity ratios and Performance of the commercial banks in Ethiopia measured by return on asset. As the regression result shows there is not significant statistical relationship between liquidity ratios and profitability of Ethiopian commercial banks measured by return on asset since the significance level is 63.32 percent. Thus the null hypothesis is failed rejected and the alternative hypothesis is not accepted. This means there is not statistically significance relationship between liquidity ratios and return on asset.

### **Regression Analysis between Return on Equity and Explanatory Variables**

The second regression analysis was done to know how much the bank is earning on their equity investment, an amount that is measured by the return on equity (ROE) in relation with explanatory variables included in this study.

$$\text{ROE} = 5.01 - 0.18 \text{CA} - 0.23 \text{AQ} - 0.13 \text{ME} + 0.000253 \text{ER} + 0.88 \text{LP} \dots (2)$$

As Table 15 shows you R-Squared statistics and adjusted R-squared statistics of the model is 86.59 and 82.95 percent respectively. This result indicates that change in independent variable explain 82.95 Percent of the change in the dependent variable that means capital adequacy ratio, asset quality ratio, management efficiency ratio, earning ratio and liquidity ratio in aggregate explain 82.95 percent of the change in ROE. This suggests that all the explanatory variables are collectively good in explaining return on equity.

The coefficient of capital adequacy, asset quality and management efficiency were negative that is -0.18, -0.23 and 0.13 respectively. This indicates that there is an inverse relationship between the aforementioned three variables and Return on equity.

On the other hand the coefficient of earning ratio and liquidity ratio was positive that is 0.0025 and 0.088 respectively. This means both variables have the effect of increasing return on equity. And statistically significant at 1% for CA, while significant at 5% for AQ and MGT, whereas the remaining variable are insignificant in affecting the ROE. According to Mulugeta (2015) and Dawit (2016), all variables are significant with different level of significance 1%, 5% and 10%.

### **Hypothesis Testing for ROE model**

Ho1: There is no significant relationship between capital adequacy ratios and Performance of the commercial banks in Ethiopia measured by return on equity. As the regression result shows there is significant statistical relationship between capital adequacy and profitability of Ethiopian commercial banks measured by the return on equity with the significance level of 0.13 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between capital adequacy and return on equity.

Ho2: There is no significant relationship between asset quality ratios and Performance of the commercial banks in Ethiopia measured by return on equity. As the regression result shows there is significant statistical relationship between asset quality and profitability of Ethiopian commercial banks measured by return on equity with the significant level of 3.26 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between asset quality and return on equity.

Ho3: There is no significant relationship between management efficiency ratios and Performance of the commercial banks in Ethiopia measured by return on equity. As the regression result shows there is significant statistical relationship between management efficiency and profitability of Ethiopian commercial banks measured by return on equity with the significance level of 4.29 percent. Thus the null hypothesis is rejected and the alternative hypothesis is accepted. This means there is statistically significance relationship between management efficiency and return on equity.

Ho4: There is no significant relationship between earning ability ratios and Performance of the commercial banks in Ethiopia measured by return on equity. As the regression result

shows there is not significant statistical relationship between earning ability ratios and profitability of Ethiopian commercial banks measured by return on equity since the significance level is 88.68 percent. Thus the null hypothesis is failed rejected and the alternative hypothesis is not accepted. This means there is not statistically significance relationship between earning ability and return on equity.

Ho5: There is no significant relationship between liquidity ratios and Performance of the commercial banks in Ethiopia measured by return on equity. As the regression result shows there is not significant statistical relationship between liquidity ratios and profitability of Ethiopian commercial banks measured by return on equity since the significance level is 61.79 percent. Thus the null hypothesis is failed rejected and the alternative hypothesis is not accepted. This means there is not statistically significance relationship between liquidity ratios and return on equity.

### **Recommendations**

Based on the study finding, the financial performance of Ethiopian commercial banks measured by ROA and ROE were mainly affected by the internal factors; i.e. Capital adequacy, Earning ability and Bank size. Since the management of the bank has control over the bank specific (internal) factors, it is possible to improve the performance of the bank by giving more attention on the identified bank specific factors such as, Capital adequacy, Earning ability and bank size.

Management bodies of Ethiopian commercial banks should strive to strengthen the bank specific factors like capital adequacy and earning ability. Since, they are found to be the most significant variables that affect financial performances of Ethiopian commercial banks measured by ROA, ROE and.

#### *For sample elements under the study*

The study revealed asset quality ratio, Management efficiency, Earning ability and liquidity are the key driver of return on asset of commercial banks in Ethiopia similarly the study also identified capital strength, management efficiency, earning ability and Liquidity as the key drivers of return on equity of Ethiopian Commercial banks. Therefore, Bank managers are advised to give due attention to those variables to improve profitability. Specially, they should offer more emphasis on the significant variable which are capital adequacy, asset quality and

management efficiency. The executive management and BOD should strive for maintain desired level of asset quality since it has directly related with the level of loan provision and loan loss.

The banks are recommended to apply the CAMEL model as self-measurement instrument for determining the financial performance and the individual banks can used for it.

CBE should strive more to make their asset qualities more by decreasing the level of loan loss or provision for loss. The speedy receivable collection method, efficient review of proposal for fund requisite and other information which is needed to ask credit from commercial banks should be properly evaluated and screened.

They have to Strengthening their capital to make them the best financial performer by selling their share to existing shareholders and new entrants to the banking industry investment.

Deposit mobilization is the main issue of the banking sector because the banks with more deposit have the capacity to disburse more loans in order to get more interest income and increasing the capital level by retained it rather than distributing it as a dividend and also the disbursed loans increases the asset of the banks, so they have to work hard on it.

It is better to commercial banks to have a diversified income source i.e. collecting more Service charges from foreign transactions like (foreign money transfer, letter of credit and other sources) because, this source of income is more crucial during loan default risk and interest rate fluctuation occur. And also Ethiopian commercial banks can improve their fee based income by introducing innovative products and services to make them best financial performer.

#### *For central bank*

Organized data has a great value or high economic value. Thus the central bank shall ask frequently and support with administrative penalties to enforce the submission of annual data to researchers, to the bank of banks. The complete financial statements of every bank is not available in the central bank.

Ranking of banks in the country level is expected from the central bank summary which will reduce the data inconsistent and finding inconsistent as much as possible.

*For the coming researchers*

The CAMEL model is useful rating tools for banking sectors, however, the tool can be equally be applicable to other related financial institution Like Micro Finance Institution and Insurance Companies. Thus, future research is recommended to use the CAMEL model for such kind of institution.

The current study uses only some representative financial ratios from factors of the CAMEL model, the financial ratios included in the research may not exhaustive and enough to evaluate the bank's Capital adequacy, asset quality, earning ability and liquidity. Therefore future researcher is recommended to consider additional financial ratios.

The current study fully employed secondary data and the analysis was fully based on financial data. However, secondary data obtained from financial reports of banks or through National Bank can have potential bias. Thus, future research is recommended to substantiate and/or triangulate secondary data by primary data such as interviewi

#### Annexure Tables

<b>Table 1</b>								
<b>Return on Asset = Net Profit After tax /Total Asset*100</b>								
<b>Year /Banks</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	1.95	1.95	1.802	2.74	2.1105	2.1105	2.1105	14
<b>BOA</b>	2.61	2.61	2.401	2.11	2.26	2.13	2.3535	13
<b>ADIB</b>	1.71	2.97	3.54	3.42	2.91	2.91	2.91	7
<b>AIB</b>	3.25	3.01	2.45	2.79	2.56	2.812	2.812	9
<b>BIB</b>	2.65	4.37	3.17	2.5	3.62	3.32	3.271667	2
<b>BUIB</b>	2.78	2.78	2.65	2.99	2.74	2.05	2.665	11
<b>CBE</b>	2.52	3.44	3	2.82	2.945	2.945	2.945	5
<b>CBO</b>	2.78	2.89	4.68	2.73	0.37	2.69	2.69	10
<b>DB</b>	3.72	3.03	3.24	2.94	2.54	2.184	2.942333	6
<b>LIB</b>	3.06	5.78	5.86	3.43	3.22	4.27	4.27	1
<b>NIB</b>	3.46	3.13	2.92	2.54	2.25	2.86	2.86	8
<b>OIB</b>	1.78	1.98	2.51	2.33	2.2	1.78	2.096667	15

<b>UB</b>	2.82	2.82	2.34	1.96	1.96	2.38	2.38	12
<b>WB</b>	4.02	3.27	2.68	2.57	2.32	2.972	2.972	4
<b>ZB</b>	3.61	2.89	3.26	3.14	2.75	2.74	3.065	3
<b>Average</b>	2.848	3.128	3.1002	2.734	2.450367	2.6769	2.822911	

<b>Table 2</b>								
<b>Return On EQUITY=</b>								
<b>NET PROFIT AFTER TAX / TATAL EQUITY CAPITAL * 100</b>								
<b>Year /Banks</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	9.142	11.25	12.74	17.52	12.663	12.663	12.663	15
<b>BOA</b>	23.9	17.7	15.89	13.19	18.6	17.856	17.856	9
<b>ADIB</b>	4.5	12.09	14.15	13.18	13.41	12.18	11.585	14
<b>AIB</b>	26.98	23.89	21.23	23.8	20.26	23.232	23.232	4
<b>BIB</b>	14.45	13.7	16.11	14.38	24.54	18.49	16.945	11
<b>BUIB</b>	15.89	15.89	15.47	19.85	19.47	14.88	16.90833	12
<b>CBE</b>	45.73	71.33	63.76	62.16	60.745	60.745	60.745	1
<b>CBO</b>	24.45	27.17	31.55	22.14	3.2	21.702	21.702	5
<b>DB</b>	35.67	29.66	27.43	24.94	21.65	18.94	26.38167	2
<b>LIB</b>	17.07	20.54	21.02	24.42	24.45	21.5	21.5	6
<b>NIB</b>	18.73	17.18	15.97	15.48	14.16	16.304	16.304	13
<b>OIB</b>	11.31	14.15	20.62	22.34	18.84	17.53	17.465	10
<b>UB</b>	23.47	23.47	17.85	16.68	16.36	19.566	19.566	7
<b>WB</b>	20.92	18.58	14.85	14.59	57.11	25.21	25.21	3
<b>ZB</b>	5.18	19.08	19.47	20.4	23.23	20.13	17.915	8
<b>Average</b>	19.82	22.378	21.87	21.67	23.245	21.3952	21.73187	

<b>Table 3</b>								
<b>Group Ranking by Capital Adequacy Parameters</b>								
<b>Banks</b>	<b>Capital/ asset</b>		<b>Loan/capital</b>		<b>Debt/capital</b>		<b>Group ranking</b>	
	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	16.2	6	224	2	495	5	245.07	6
<b>BOA</b>	12.145	12	376	11	730	12	223.05	3
<b>ADIB</b>	26.93	1	156	1	281	1	154.64	1
<b>AIB</b>	12.19	11	352	9	178	10	180.73	2
<b>BIB</b>	20	2	259	4	456	2	245	5
<b>BUIB</b>	15.51	7	309	8	521	6	281.84	8
<b>CBE</b>	5.34	15	775	15	2008	15	929.45	15
<b>CBO</b>	12.116	13	380	12	736	13	376.04	13
<b>DB</b>	11.285	14	407	14	789	14	402.43	14
<b>LIB</b>	17.41	5	282	5	556	7	285.14	9
<b>NIB</b>	17.46	4	292	7	474	4	261.46	7
<b>OIB</b>	12.36	10	357	10	647	9	338.79	11
<b>UB</b>	12.44	9	390	13	723	11	375.15	12
<b>WB</b>	17.96	3	250	3	465	3	244.32	4
<b>ZB</b>	14.42	8	285	6	597	8	298.81	10

<b>Table 4</b>								
<b>Group Ranking by Asset Quality Parameters</b>								
<b>Banks</b>	<b>Total loan &amp; advance/total asset</b>		<b>Total investment/total asset</b>		<b>Total loan loss(provision)/total loan</b>		<b>Group ranking</b>	
	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	46.05	7	19.21	2	2.55	13	22.6	7
<b>BOA</b>	47.23	4	24.75	12	2.345	12	27.78	15
<b>ADIB</b>	40.69	13	20.99	5	2.16	9	21.28	3
<b>AIB</b>	44.2	10	19.48	3	2.81	14	22.16	4
<b>BIB</b>	51.12	1	22.15	8	1.36	2	24.87	12
<b>BUIB</b>	49.49	2	22.05	7	1.35	1	24.3	11
<b>CBE</b>	35.19	15	45.16	15	2.28	11	27.54	14
<b>CBO</b>	46.11	6	12.85	1	1.62	5	20.2	1
<b>DB</b>	45.46	9	21.56	6	2.06	6	20.12	2
<b>LIB</b>	46.53	5	19.55	4	1.45	3	22.51	6
<b>NIB</b>	48.8	3	24.68	11	2.19	10	25.22	13
<b>OIB</b>	42.71	12	22.21	9	1.51	4	22.22	5
<b>UB</b>	45.95	8	23.73	10	2.105	8	23.93	8
<b>WB</b>	43.9	11	26.41	13	1.74	7	24.02	9
<b>ZB</b>	40.46	14	28	14	4.23	15	24.23	10

<b>Table 5</b>								
<b>Group Ranking by Management Efficiency Parameters</b>								
<b>Banks</b>	<b>Total interest expense/total deposit</b>		<b>Total loan &amp; advances/total deposit</b>		<b>Non-interest expense/total income</b>		<b>Group ranking</b>	
	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	1.8	2	60.83	9	56.92	14	39.85	15
<b>BOA</b>	3.2	10	58.56	11	50.45	12	37.4	7
<b>ADIB</b>	3.28	12	66.44	1	44.88	6	38.2	10
<b>AIB</b>	3.2	10	61.86	8	43.24	5	36.86	6
<b>BIB</b>	2.74	7	61.94	7	45.52	8	36.73	5
<b>BUIB</b>	2.9	8	65.47	3	45.4	7	37.92	8
<b>CBE</b>	1.69	1	45.32	15	24	1	23.67	1
<b>CBO</b>	1.99	3	63.44	5	50.2	11	38.54	13
<b>DB</b>	3.41	14	56.72	12	37.72	2	32.62	2
<b>LIB</b>	2.52	5	63.16	6	40.97	3	35.55	4
<b>NIB</b>	2.96	9	65.48	2	47.87	9	38.77	14
<b>OIB</b>	2.15	4	53	14	59.1	15	38.08	9
<b>UB</b>	2.28	13	60.75	10	51.59	13	38.21	11
<b>WB</b>	2.72	6	64.25	4	48.42	10	38.46	12
<b>ZB</b>	3.81	15	53.08	13	42.85	4	33.25	3

**Table 6****Group Ranking by Earning Ability Parameters**

<b>Banks</b>	<b>Interest income/ total income</b>		<b>Net interest income/total income</b>		<b>Net interest income/total loan &amp; advance</b>		<b>Group ranking</b>	
	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	57.38	8	35.52	10	6.532	14	33.144	9
<b>BOA</b>	68.94	4	39.61	6	7.76	9	38.77	4
<b>ADIB</b>	43.92	15	25.18	14	6.61	12	25.23	14
<b>AIB</b>	57.22	9	33.72	12	7.034	11	32.66	12
<b>BIB</b>	56	11	34.86	11	7.45	10	32.77	11
<b>BUIB</b>	64.23	5	42.65	3	8.346	5	38.41	5
<b>CBE</b>	70.33	1	51.69	1	9	1	43.67	1
<b>CBO</b>	57.2	10	37.46	8	8.726	2	34.46	8
<b>DB</b>	50.64	13	28.07	13	6.045	13	28.25	13
<b>LIB</b>	54.24	12	36.74	9	7.95	8	32.98	10
<b>NIB</b>	70.2	2	45.60	2	8.67	3	41.49	2
<b>OIB</b>	59.91	7	39.46	7	8.27	6	35.88	7
<b>UB</b>	69.17	3	40.84	5	8.157	7	39.39	3
<b>WB</b>	61.63	6	41.43	4	8.44	4	37.17	6
<b>ZB</b>	45.53	14	18.77	15	4.82	15	23.04	15

<b>Table 7</b>								
<b>Group Ranking by Liquidity Position Parameters</b>								
<b>Banks</b>	<b>Total loan &amp; advance/total asset</b>		<b>Total liquid asset/total deposit</b>		<b>Total liquid asset/total asset</b>		<b>Group ranking</b>	
	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>	<b>Average</b>	<b>Rank</b>
<b>AB</b>	46.05	7	39.48	3	28.335	4	37.96	3
<b>BOA</b>	47.23	4	24.15	12	19.381	12	30.25	12
<b>ADIB</b>	40.69	13	55.13	1	33.234	2	43.018	1
<b>AIB</b>	44.2	10	28.44	10	19.949	11	30.863	11
<b>BIB</b>	51.12	1	42.42	2	35.467	1	43	2
<b>BUIB</b>	49.49	2	31.81	7	23.638	8	34.98	6
<b>CBE</b>	35.19	15	12.39	15	9.58	15	19.05	15
<b>CBO</b>	46.11	6	39.48	4	27.898	5	37.83	4
<b>DB</b>	45.46	9	32.22	6	25.832	6	34.504	7
<b>LIB</b>	46.53	5	23.29	13	17.114	13	28.98	13
<b>NIB</b>	48.8	3	28.99	9	21.518	9	33.1	8
<b>OIB</b>	42.71	12	30.02	8	24.058	7	32.26	9
<b>UB</b>	45.95	8	27.66	11	21.063	10	31.56	10
<b>WB</b>	43.9	11	18.21	14	12.259	14	24.79	14
<b>ZB</b>	40.46	14	38.24	5	29.054	3	35.92	5

<b>Table 8</b>							
	<b>ROE</b>	<b>ROA</b>	<b>CA</b>	<b>AQ</b>	<b>ME</b>	<b>ER</b>	<b>LP</b>
<b>Mean</b>	21.731	2.82291	14.9202	2.11726	45.590	7.56266	60.0212
<b>Median</b>	18.890	2.78000	13.8650	1.85500	43.530	7.97500	60.6650
<b>Maximum</b>	71.330	5.86000	38.0600	7.83000	75.330	10.1900	89.1100
<b>Minimum</b>	3.2000	0.37000	4.37000	1.03000	19.860	3.26000	42.9500
<b>Std. Dev.</b>	12.641	0.77535	5.45328	1.01105	11.472	1.42685	7.93545
<b>Observations</b>	90	90	90	90	90	90	90

<b>Table 9</b>						
	<b>ROA</b>	<b>CAR</b>	<b>AQ</b>	<b>MGT</b>	<b>ERN</b>	<b>LIQ</b>
<b>ROA</b>	1.000000					
<b>CAR</b>	0.197332	1.000000				
<b>AQ</b>	0.030687	0.286706	1.000000	0.224659		
<b>MGT</b>	-0.419812	0.357939	0.224659	1.000000		
<b>ERN</b>	-0.047440	-0.215931	0.259072	0.113537	1.000000	
<b>LIQ</b>	0.038378	0.495755	0.184438	0.292762	0.037673	1.000000

<b>Table 10</b>						
	<b>ROE</b>	<b>CAR</b>	<b>AQ</b>	<b>MGT</b>	<b>ERN</b>	<b>LIQ</b>
<b>ROE</b>	1.000000					
<b>CAR</b>	-0.604421	1.000000				
<b>AQ</b>	-0.170779	0.286706	1.000000			
<b>MGT</b>	-0.595365	0.357939	0.224659	1.000000		
<b>ERN</b>	0.145929	-0.215931	0.259072	0.113537	1.000000	
<b>LIQ</b>	-0.387061	0.495755	0.184438	0.292762	0.037673	1.000000

<b>Table 11</b>			
<b>Heteroskedasticity Test: Breusch-Pagan-Godfrey (ROA)</b>			
F-statistic	0.986491	Prob. F(5,84)	0.4310
Obs*R-squared	4.991665	Prob. Chi-Square(5)	0.4169
<b>Heteroskedasticity Test: Breusch-Pagan-Godfrey (ROE)</b>			
F-statistic	1.322957	Prob. F(5,84)	0.2623
Obs*R-squared	6.569905	Prob. Chi-Square(5)	0.2546

<b>Table 12</b>		
<b>Durbin-Watson Test Results for the Regression Model</b>		
<b>Test</b>	<b>Return on Asset</b>	<b>Return on Equity</b>
Durbin Watson test	2.028743	1.873686

<b>Table 13</b>					
<b>Test of Multicollinearity</b>					
	<b>CA</b>	<b>AQ</b>	<b>MGT</b>	<b>ERN</b>	<b>LIQ</b>
<b>CA</b>	1.000000	0.286706	0.357939	-0.215931	0.495755
<b>AQ</b>	0.286706	1.000000	0.224659	0.259072	0.184438
<b>MGT</b>	0.357939	0.224659	1.000000	0.113537	0.292762
<b>ERN</b>	-0.215931	0.259072	0.113537	1.000000	0.037674
<b>LIQ</b>	0.495755	0.184438	0.292762	0.037674	1.000000

**Table 14**

<b>Regression Analysis between Return on Asset and Explanatory Variables</b>				
Dependent Variable: ROA				
Method: Panel EGLS (Cross-section weights)				
Date: 05/08/18 Time: 16:12				
Sample: 2012 2017				
Periods included: 6				
Cross-sections included: 15				
Total panel (balanced) observations: 90				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CA	0.317966	0.176799	1.798465	0.0764**
AQ	-0.691335	0.270567	-2.555132	0.0128*
ME	-0.396807	0.068288	-5.810779	0.0000
ER	0.000465	0.003207	0.145110	0.8850
LP	-0.245560	0.512365	-0.479267	0.6332
C	5.624898	2.420880	2.323493	0.0231
	Effects Specification			
Cross-section fixed (dummy variables)				
	Weighted Statistics			
R-squared	0.702046	F-statistic	8.680817	
Adjusted R-squared	0.621173	Prob(F-statistic)	0.000000	
S.E. of regression	0.570251	Durbin Watson test	2.028743	

<b>Table 15</b>				
<b>Regression Analysis between Return on Equity and Explanatory Variables</b>				
Dependent Variable: ROE				
Method: Panel EGLS (Cross-section weights)				
Date: 05/08/18 Time: 16:22				
Sample: 2012 2017				
Periods included: 6				
Cross-sections included: 15				
Total panel (balanced) observations: 90				
Linear estimation after one-step weighting matrix				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CA	-0.180551	0.054050	-3.340429	0.0013
AQ	-0.232768	0.106769	-2.180101	0.0326*
ME	-0.130284	0.063170	-2.062430	0.0429*
ER	0.000253	0.001770	-0.142924	0.8868
LP	0.088774	0.177154	-0.501114	0.6179
C	5.017757	0.375651	13.35750	0.0000
	Effects Specification			
Cross-section fixed (dummy variables)				
	Weighted Statistics			
R-squared	0.865907			
Adjusted R-squared	0.829510			
S.E. of regression	0.326833			
F-statistic	23.79075	Durbin-Watson stat		1.873686
Prob (F-statistic)	0.000000			

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# **Effective Utilization of Copper Slag for the Production of Green and Sustainable Concrete**

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## **Abstract**

*Scarcity and increasing cost of river sand due to large scale depletion of river bed has created a huge demand for alternative form of fine aggregate in preparation of concrete by the construction industry and builders. Several non-conventional resources such as stone dust, fly ash, carbonated sand, copper slag etc. with higher percentage of silica (SiO<sub>2</sub>) have been tried out as a substitute to river sand as fine aggregate in concrete preparation. Out of these non-conventional materials, copper slag is one such industrial waste, which is produced during the metal smelting process of copper production. Few studies have indicated that it can be suitably used as one of the major component of green concrete contributing towards reducing CO<sub>2</sub> emission from concrete. As part of this research, experimental studies have been conducted to study various strength and durability aspects of copper slag admixed concrete and outcome on strength properties of concrete by partially replacing river sand with copper slag has been promising, also the optimum percentage of copper slag has been established as 40% for partial replacement of sand. However to prove copper slag as a building material it is imperative to study the durability aspects of copper slag concrete as well. This paper presents the mechanical properties and durability properties of copper slag concrete. An attempt has been made to find the optimum percentage of copper slag for partial replacement of sand in preparation of concrete from strength perspective. From durability perspective, effect of elevated temperature and acid attack on copper slag concrete have been presented. The results show that copper slag concrete has an excellent strength and durability properties compared to normal concrete and can be effectively utilized as a partial replacement of fine aggregate in preparation of green and sustainable concrete.*

**Keywords: Copper Slag, High Temperature, Acid Attack, Compressive Strength, Durability**

## **Introduction**

Copper slag is a waste material produced through the metal smelting phase of copper production. According to ICSG (International Copper Study Group), the global copper production in 2017 was about 19.1 million tonnes. During metal smelting phase, approximately 2.5 kgs of copper slag is produced for extracting 1 kg of copper from the ore. The amount of waste produced is too huge which creates a big disposal problem for the copper manufacturing plants. Huge piles of copper slag can be seen around the copper manufacturing plants which is a big concern from the perspective of environmental pollution. Copper slag have been tried as a land filling material, also few strength studies have proved that copper slag can be used as a partial replacement of sand in concrete. However, durability aspects of concrete are a major issue these days owing to several deteriorations caused by environmental and manmade disorders. Major attention was generally given to strength criteria of concrete, however lately durability criteria of concrete also drew consideration of the researchers and engineers. Generally, durability of concrete is the ability to resist the chemical attack, unforeseen events, abrasion and weathering action without compromising the essential strength properties. Durable concrete performs in a satisfactory manner in the working condition during its anticipated service life. This paper presents the initial experimental investigation results for identifying the optimum percentage of copper slag in concrete to be used as a partial replacement of sand. Further, as part of durability study the impact of high temperature and acids attack on copper slag concrete (with optimum percentage of copper slag) and have been examined and compared with normal concrete.

## **Material Properties**

### **Coarse Aggregate**

Angular crushed granite metal of size 20mm, having specific gravity 2.6 and fineness modulus 7.1 was used. Loose state bulk density and compacted state bulk density were found to be 1414 kg/m<sup>3</sup> and 1550 kg/m<sup>3</sup> respectively. The water absorption was found to be 1.1%.

### **Fine Aggregate**

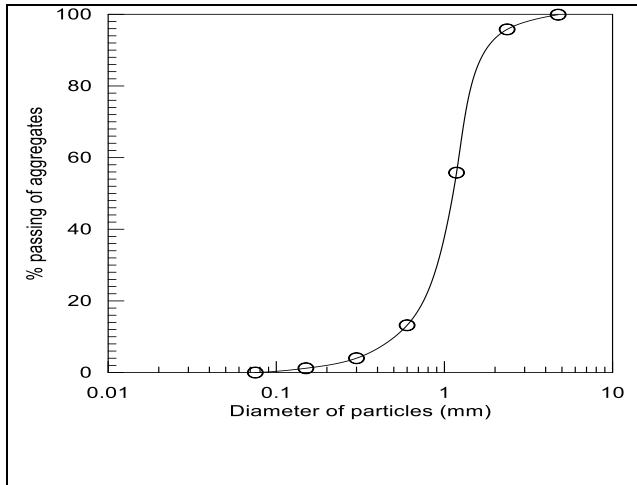
Locally available river sand having specific gravity 2.6 and fineness modulus 2.4 was used for this experimental investigation. Loose state bulk density and compacted state bulk density were found to be 1597 kg/m<sup>3</sup> and 1700kg/m<sup>3</sup> respectively. The water absorption was found to be 1.20%.

**Cement**

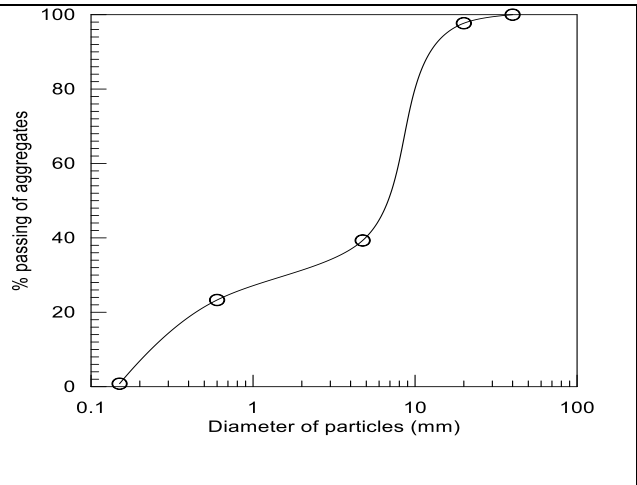
53 grade ordinary portland cement having specific gravity 3.094, fineness modulus 4.62% and normal consistency 32% was used. The quality of the cement was verified by conducting various tests as per IS 4031-1988, and confirming to specifications of IS 12269-1987.

**Copper Slag**

Copper slag having specific gravity 3.47 and fineness modulus 3.3 was used for this experimental investigation. Loose state bulk density and compacted state bulk density were found to be 1898 kg/m<sup>3</sup> and 2024 kg/m<sup>3</sup> respectively. The water absorption was found to be 0.24%. According to the chemical analysis 33.52% of silica was found in the copper slag used in the current investigation.



**Figure 1: Grading of Copper Slag**



**Figure 2: Combined grading of Aggregates**

<p><b>Table 1: Chemical Composition of Cement</b></p>	<p><b>Table 2: Chemical Composition of Copper Slag</b></p>
-----------------------------------------------------------	------------------------------------------------------------

S. No.	Composition	Percentage (in %)	S. No.	Composition	Percentage (in %)
1	Sulphuric Anhydride	1.93	1	Iron - Fe <sub>2</sub> O <sub>3</sub>	55.8
2	Loss of Ignition	1.39	2	Silica - SiO <sub>2</sub>	33.52
3	Magnesia	1.12	3	Aluminium - Al <sub>2</sub> O <sub>3</sub>	3.8
4	Insoluble Residue	1.14	4	Calcium -CaO	3.14
5	Alumina Iron Ratio	1.18	5	Potassium - K <sub>2</sub> O	0.76
6	Alkali Oxides	0.6	6	Magnesium -MgO	0.72
7	Lime Saturation Factor	0.82	7	Sodium - Na <sub>2</sub> O	0.4
			8	Titanium - TiO <sub>2</sub>	0.5
			9	Copper - Cu	0.99

### Mix Design and Mixes

According to IS: 10262 – 2009, the concrete mix design was done and the materials quantities were calculated. Six type of concrete mixes were prepared by replacing copper slag by river sand from 0% to 50% (CS0, CS10, CS20, CS30, CS40 and CS50). From the compressive strength test results the optimum percentage of copper slag was fixed and further the concrete test specimens with optimum percentage of copper slag were used to study the effect of high temperature and compared with normal concrete. The mix proportions is presented in the Table 3.

**Table 3: Proportions of M20 grade Concrete**

<b>Grade</b>	<b>Cement (Kg/m<sup>3</sup>)</b>	<b>Fine Aggregate (Kg/m<sup>3</sup>)</b>	<b>Coarse Aggregate Kg/m<sup>3</sup>)</b>	<b>W/C Ratio</b>	<b>Water (Kg/m<sup>3</sup>)</b>	<b>Mix Proportion</b>
<b>M-20</b>	<b>320</b>	<b>712</b>	<b>1178</b>	<b>176</b>	<b>0.55</b>	<b>1:2.225:3.68</b>

### **Testing Procedure**

During the concrete preparation process, the vital factors like appropriate mixing, compaction and sufficient curing were adopted. For mixing the concrete, pan mixture was preferred over hand mixing and the mixing was kept for about 3-4 minutes. The samples were taken out of the moulds after 24 hours of casting and adequately cured using clean water. The specimens were tested for their compressive strength at different age i.e 28 days, 90 days and 180 days. To study the effect of high temperature, test specimens were taken out of curing after 28 days and surface dried by a dry cloth after which they were put in an electric oven for 4 hours at three different temperatures i.e. 200° C, 400° C and 600°. After the concrete specimens were exposed to high temperature for 4 hours, those were taken out of the electric oven and the weight and strength changes were calculated. To measure the effect of acids attack on copper slag concrete, the 28 days cured concrete cube specimens were completely immersed in three different solutions i.e.H<sub>2</sub>SO<sub>4</sub>, HCl and Na<sub>2</sub>SO<sub>4</sub> and tested at 28, 56 and 90 days to check the effect on compressive strength. For each test result an average of three test samples were used.

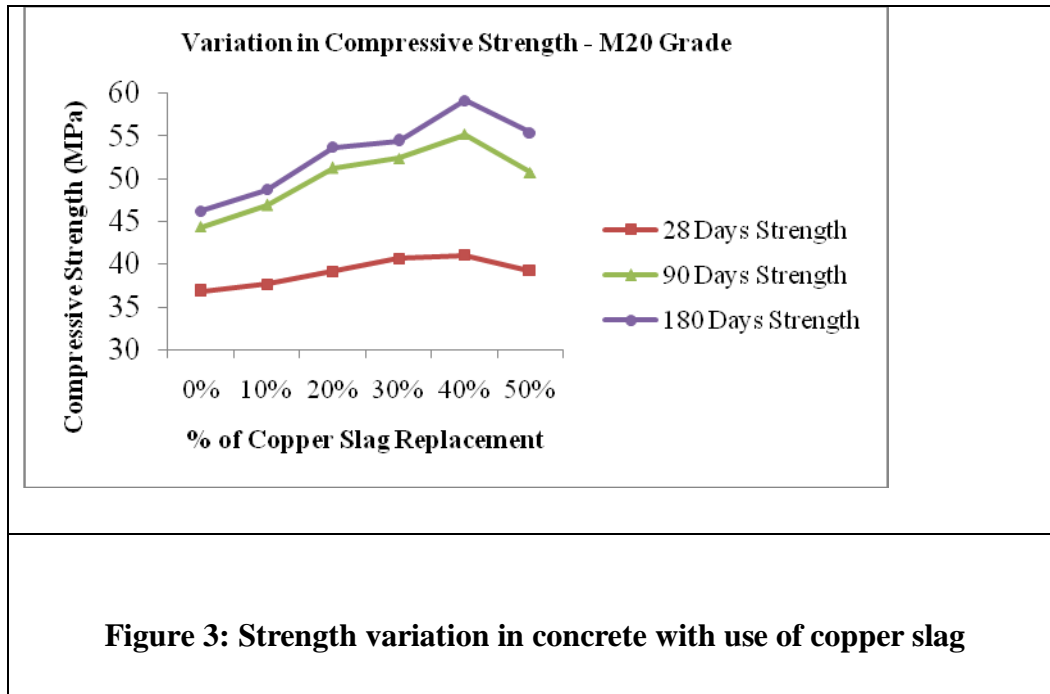
### **Results and Discussion**

#### **Effect of Copper Slag as a Fine Aggregate in Concrete**

The effect of using copper slag as a partial replacement of sand (0% to 50%) on compressive strength of concrete at different ages is shown in Table 4. The strength variations have also been shown graphically in Figure 3. The compressive strength test set up is shown in the Figure 4.

**Table 4: Effect of copper slag as a fine aggregate in concrete**

Mix	% Copper Slag replacement	Density (Kg/m <sup>3</sup> )	Percentage increase in Compressive Strength with respect to CS0			Percentage increase in Compressive Strength with respect to Age		
			28 days	90 days	180 days	28 days	90 days	180 days
M20	0%	2571	-	-	-	-	20.49	25.54
	10%	2578	2.23	5.68	5.41	-	24.56	29.45
	20%	2588	6.3	15.52	16.17	-	30.93	37.19
	30%	2679	10.41	18.11	17.71	-	28.89	33.84
	40%	2696	11.55	24.42	27.92	-	34.4	43.97
	50%	2724	6.66	14.46	19.78	-	29.3	40.99



It can be clearly observed from the Table 4 that with increase in the copper slag percentage from 0% to 40%, the compressive strength of concrete is improving. By rising the copper slag content beyond 40%, the compressive strength of concrete is reducing. Similar tendency of strength variation is observed at 28 days, 90 days and 180 days. It has been observed that the workability of concrete increases by increasing the copper slag content due to the low water absorption, glassy surface and coarser particles of the copper slag, which helps in increasing the compressive strength. But beyond 40% of copper slag replacement, the free water content significantly increases there by reducing the compressive strength. As per the above test results, the optimum percentage of copper slag as partial replacement of sand in concrete is fixed to be 40%.

### Effect of Higher Temperature on Copper Slag Concrete

The effect of high temperature on weight, ultrasonic pulse velocity and compressive strength of M20 grade normal and copper slag concrete after exposed to 200°C, 400°C and 600°C for 4 hours has been presented in Table 5. Test samples subjected to high temperature in an electric oven is shown in the Figure 5. A copper slag concrete sample after exposed to 600°C for 4 hours is shown in the Figure 6. It can be clearly observed from the Table 5 that, the weight loss for both normal and copper slag concrete are increasing when subjected to 200°C, 400°C and 600°C

for 4 hours. It can also be observed that the weight loss for copper slag concrete is relatively low compared to normal concrete.

The percentage loss in ultrasonic pulse velocity and compressive strength is increasing with the increase in temperature. At 200°C and 400°C, the percentage of loss for copper slag concrete is comparatively low than normal concrete however the percentage of loss of for copper slag concrete is little higher than normal concrete at 600°C.

The high amount of loss in ultrasonic pulse velocity and compressive strength in copper slag concrete at 600° C is attributed to the thermal expansion of copper slag causing development of thermal cracks on the surface of copper slag concrete. At 600°C, due to the high pore pressure produced by the internal moisture in the highly dense and impermeable copper slag concrete sever deformation and spalling are found.

**Table 5: Variation in Wt., UPV and Compressive Strength Copper Slag Concrete at Elevated Temperature**

<b>Mix</b>	<b>Temp (°C).</b>	<b>Initial wt. (kg)</b>	<b>Final wt. (kg)</b>	<b>% of loss in weight</b>	<b>Initial UPV (Km/S)</b>	<b>Final UPV (Km/S)</b>	<b>% of loss in UPV</b>	<b>Initial Comp. Strength</b>	<b>Final Comp. Strength</b>	<b>% of loss in Comp. Strength</b>
M20-CS-SFRC-0-0	200	2.431	2.36	2.92	4.358	3.372	22.63	36.8	34.78	5.49
	400	2.393	2.314	3.3	4.366	2.799	35.89	36.8	32.05	12.91
	600	2.513	2.399	4.54	4.358	1.725	60.42	36.8	28.96	21.3
M20-CS-SFRC-40-0	200	2.583	2.524	2.28	4.462	3.57	19.99	41.05	39.04	4.9
	400	2.58	2.498	3.18	4.46	2.914	34.66	41.05	36.64	10.74
	600	2.645	2.541	3.93	4.558	1.725	62.15	41.05	31.54	23.17



**Figure 4: Compressive Strength Test Setup in CTM**



**Figure 5: Concrete Specimens Subjected to Elevated Temperature**



**Figure 6 : Copper slag Concrete after exposed to 600<sup>o</sup> C.**

### **Effect of Acids Attack on Copper Slag Concrete**

#### **Impact on Compressive Strength Due to HCl Acid Attack**

The impact on compressive strength of M20 grade copper slag concrete after immersing in HCl solution measured at various ages are presented in Table 6.

**Table 6: Impact on Compressive Strength of Copper Slag Concrete due to HCL Acid Solution attack**

<b>M 20 Grade</b>	<b>Percentage decrease in Comp. Strength at 30 Days</b>	<b>Percentage decrease in Comp. Strength at 60 Days</b>	<b>Percentage decrease in Comp. Strength at 90 Days</b>
CS0	8	27	29
CS40	41	53	55

It can be observed that normal concrete (CS0) has lower loss of compressive strength compared to copper slag concrete (CS40) when exposed to HCl. The percentage decrease is observed to be increasing in correspondence with time as well. CS0 specimens showed higher resistance to HCl acid attack than CS40 specimens. Deterioration of concrete does not occur due to HCl attack.

Impact on Compressive Strength Due to H<sub>2</sub>SO<sub>4</sub> Acid Attack

The impact on compressive strength of M20 grade copper slag concrete after immersing in H<sub>2</sub>SO<sub>4</sub> solution measured at various ages are presented in Table 7.

**Table 7: Impact on Compressive Strength of Copper Slag Concrete due to H<sub>2</sub>SO<sub>4</sub> Acid Solution attack**

<b>M20 Grade</b>	<b>Percentage decrease in Comp. Strength at 30 Days</b>	<b>Percentage decrease in Comp. Strength at 60 Days</b>	<b>Percentage decrease in Comp. Strength at 90 Days</b>
CS0	19	38	42
CS40	51	65	68

It can be observed that normal concrete (CS0) has lower loss of compressive strength compared to copper slag concrete (CS40) when exposed to H<sub>2</sub>SO<sub>4</sub>. The percentage decrease is observed to

be increasing in correspondence with time as well. CS0 specimens showed higher resistance to  $H_2SO_4$  acid attack than CS40 specimens.

The concrete prepared with copper slag showed relatively higher mass change. Although both control and copper slag concrete suffered slight mass losses during the early periods, the overall loss in mass of the copper slag replaced specimens was much higher. The outer portion of cubes got destroyed and there was a maximum reduction of 3 mm at all sides for all specimens.

#### Impact on Compressive Strength Due to Sulphate Attack

The percentage decrease in compressive strength of M20 grade of CS0 and CS40 mixes after immersing in  $Na_2SO_4$  is found to be nil at 30, 60 and 90 days. This indicates that copper slag concrete has good resistance against  $Na_2SO_4$  solution.

#### **Conclusions**

- Copper slag can be used as a sustainable building material in form of fine aggregate by partially replacing sand in preparation of concrete.
- The use of copper slag as a building material helps in reducing the environmental impacts also the industrial waste dumping issues of copper manufacturing plants can be resolved to some extent.
- The optimum percentage of copper slag as partial replacement of sand in concrete is found to be 40%.
- Beyond 40% of copper slag replacement, the free water content increases thereby causing reduction in compressive strength.
- The weight loss of copper slag concrete is less compared to normal concrete at high temperature.
- The resistance to strength loss of copper slag concrete found to be better than normal concrete at 200°C and 400°C. At 600°C both normal and copper slag concrete performs almost similarly.
- The strength loss in normal and copper slag concrete is quick beyond 400°C.
- In general the compressive strength of concrete with optimum percentage of copper slag is better due to the dense microstructure making it extremely impermeable. At high

temperature, high pore pressure is developed due to the dense microstructure causing micro cracks and spalling which attributes to spalling and loss of compressive strength.

- High thermal expansion also attribute to the loss in compressive strength at 600°C.
- Concrete containing copper slag is low resistant to the  $H_2SO_4$  and HCl attack than the control concrete.
- Copper slag concrete is higher resistant to HCl attack as compared to  $H_2SO_4$  attack.
- Copper slag concrete has good resistance against  $Na_2SO_4$  solution.

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## **Factors Influencing Purchasing Performance in Wolaita Sodo University: Employee Expectation**

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### **Abstract**

*The main purpose of this research was to identify the factors that influence Employee expectation in purchasing performance in Wolaita Sodo University. The study was focused on four Variables (Procurement planning, top management support, Staff Competency and Work Environment. The study employed causal research design. The target population was all procurement staff, college deans, officers and department heads in Wolaita Sodo University. These respondents are selected because they have the proximity and knowledge regarding procurement performance of Wolaita Sodo University. A Questionnaire was the main data collection instruments. The study employs both quantitative and qualitative analysis techniques. In order to find out factors that influence employee expectation in purchasing performance a regression model was used. According to the research finding the four variables were tested by using regression model and Pearson correlation coefficient. So from the four studied variables, the three variables, namely procurement planning staff competency and top management support had found significant in influencing procurement performance accounts 63.5% and there is also a positive relationship between procurement performance and the four independent variables in Wolaita Sodo University*

**Key Words:** *factors that influence purchasing performance, procurement planning, staff competency, management Support and work environment*

## **Introduction**

Public procurement is key to government service delivery, yet constraints affect its performance. Procurement is perceived as prone to corruption; occasioning waste and affecting quality of service and life improving opportunities. There is need to reverse this worrying trend and win public confidence.(Waters, 2004).

The demand for greater productivity, efficiency and spending restraint in Ethiopian public higher education continues to grow. Procurement performance is constrained by many factors. In public universities users of procurement service still questions what is behind with the poor performance of the procurement. It is known that the procurement procedure involves many stake holders, from planning to final delivery of goods & services to users. Identifying the determinant factors of procurement performance helps to take remedial actions in utilizing government budget allocated to public universities efficiently and effectively.

According to YirgaTeshahun, 2011 out of the total public spending, more than 60 percent goes to procuring public goods and services according to the Ethiopian procurement and property Administration Agency (PPA) report. Though public procurement shares 60 percent of the total public spending, it hasn't been given due attention so far in the country.

This study intended to make an in-depth assessment of factors affecting procurement performance so as to improve productivity. There is growing demand from the staff for service higher levels. The study attempted to identify ways for enhanced procurement system which, if implemented, can contribute to socio-economic benefits for the university procurement, and government in general.

## **Procurement Performance**

**Lardenoije, van Raaij and van Weele (2005)** asserted that basing on financial performance and neglecting non-financial performance cannot improve the procurement operations because only partial performance is considered. Realization of procurement goals is influenced by internal and

external forces. Interactions between various elements; professionalism, staffing levels and budget resources, procurement organizational structure, regulations, rules, and guidance, and internal control policies, all need attention and influence procurement performance.

**Christopher (2005)** distinguished features of a responsive organization. Major transformations are; from functions to process, profit to performance, products to customers, inventory to information, and transactions to relationships. Critical measures of procurement performance need to be continuously monitored. The idea of ‘Key Performance Indicators’ (KPI) framework suggests that whereas there are many measures of procurement performance to be deployed in an organization, only a small number of critical dimensions contribute more than proportionately to success or failure. A balanced scorecard can provide guidance on critical areas where action may be needed to ensure achievement of goals. Three key outcomes of success are: better, faster, and cheaper. The goals combine customer-based measures of performance in terms of total quality with internal measures of resource and asset utilization.

Benchmarking helps identify current best practice and then focuses on how processes could be re-engineered and managed to achieve excellence in critical procurement areas. Emphasis should be on search for strategies that provide superior value in the eyes of customers seeking greater responsiveness and reliability. Van Weele (2006) maintained that there is a link between procurement process, efficiency, effectiveness and performance.

Procurement performance starts from purchasing efficiency and effectiveness in the procurement function in order to change from being reactive to being proactive to attain set performance levels in an entity. Performance provides the basis for an organization to assess how well it is progressing towards its predetermined objectives, identifies areas of strengths and weaknesses and decides on future initiatives with the goal of how to initiate performance improvements. Procurement performance is not an end in itself but a means to control and monitor the procurement function. For any organization to change its focus and become more competitive, performance is a key driver to improving quality of services(Nzau, A. &Njeru, 2014).

Batenburg and Versendaal (2006) noted that use of inappropriate means can be a barrier to change and may lead to deterioration of procurement operations. Organizations which do not

have performance means in their processes, procedures, and plans experience lower performance and higher customer dissatisfaction and employee turnover. Measuring procurement performance yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage. Electronic processes have replaced physical and paper-based processes. Procurement moves tendering, negotiation and purchasing processes to websites. Improvement to a procurement performance can be realized through reduced costs and wider choice available.

### **Objectives of the Study**

The objective of this study was to find out the factors that determine procurement performance in Wolaita Sodo University.

### **Conceptual Construct of this Research**

*The variables studied would be regressed using a model and all coefficients were interpreted.*

*The model took this form:*

$$Y = \beta_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3 + \beta_4 \chi_4$$

*Where: Y = Dependent Variable (Procurement Performance)*

*$\chi_1$  -  $\chi_4$  = independent variable ( $\chi_1$  is Procurement plan,  $\chi_2$  is Staff Competency,  $\chi_3$  is Management Support and  $\chi_4$  is Work Environment)  $\beta_0$  = the constant*

*$\beta_1$  -  $\beta_4$  = the regression coefficient or change included in Y by each  $\chi$*

### **Research Hypothesis**

Accordingly, the study tests the following four hypotheses to achieve the research objectives.

This were;-

H<sub>1</sub> Procurement Planning has significant influence on the procurement performance of Wolaitasodo University

**H2** Staff Competency has significant influence on procurement performance of Wolaitasodo University

**H3** Top management support has significant influence on the procurement performance of Wolaitasodo University

**H4** Work environment has significant influence on the procurement performance of Wolaitasodo University

### **Procurement Process**

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Waters 2004).

Sound public procurement policies and practices are among the essential elements of good governance (KIPPRA, 2006). Otieno (2004) notes the irregular procurement activities in public institutions provide the biggest loophole through which public resources are misappropriated. According to Thai (2001), the basic principles of good procurement practice include accountability, where effective mechanisms must be in place in order to enable procuring entities spend the limited resources carefully, knowing clearly that they are accountable to members of the public; competitive supply, which requires the procurement be carried out by competition unless there are convincing reasons for single sourcing; and consistency, which emphasizes the equal treatment of all bidders irrespective of race, nationality or political affiliation.

The process should also uphold integrity by ensuring that there are no malpractices; informed decision-making, which requires public bodies to base decisions on accurate information and ensure that requirements are being met. More still, the Procurement practice should be responsive to aspirations, expectations and needs of the target society. Finally, there is need for

transparency to enhance openness and clarity on procurement policy and its delivery (World Bank, 2003).

## **Research Methodology**

This deals with: study setting/Area of study/ research design, conceptual framework, population, Sampling and sampling techniques, data collection tools and method of data analysis and presentation.

## **Research Design**

In this research I used causal research design. Because Causal research can be conducted in order to assess impacts of specific changes on existing norms, various processes and Causal research is also conducted in order to identify the extent and nature of cause-and-effect relationships. Causal Research explores the effect of one thing on another and more specifically, the effect of one variable on another. In this research the researcher wants to find out the effect of independent variable that is procurement planning, staff competency, top management support and work environment on procurement performance.

## **Sample Size and Sampling Technique**

Purposive Sampling was used when research design necessitate researchers taking a decision about the individual participants who would be most likely to contribute appropriate data, both in terms of relevance and depth.

A form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, which may include specialist knowledge of the research issue, capacity and willingness to participate in the research. On this research the target population was picked since they were deemed to have knowledge on the study area.

### **Data source and type**

In the process of carrying out the study, both primary and secondary data source was used. Primary data was collected through questionnaire and interview while secondary data was gathered from books, internet, published and unpublished documents.

### **Data collection tools**

I had used different data collection tools. From different tools closed questionnaires and interviews are the major one. After the data collection activity was accomplished the data analysis would be done. The data collected through questionnaires, interviews and field observation would be analyzed. The Likert Five Point rating scale of 5, 4, 3, 2, and 1, and were used to analyze responses.

I was conducting a multiple regression analysis so as to assess the determinants of procurement performance in Wolaita Sodo University. The researcher applied the statistical package version 16 SPSS, to enter and compute the measurements of the multiple regressions for the study.

### **Data Analysis and Presentation**

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then code to enable the responses to be grouped into various categories. Data collected would be analyzed by descriptive statistics. In addition, to determine the level of significance between the independent variables and the dependent variable, regression analysis was employed

### **Data Analysis and Presentation**

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then coded to enable the responses to be grouped into various categories. Data collected was quantitative and qualitative it was analyzed by descriptive statistics. In addition, to determine the level of significance between the independent variables and the dependent variable, regression analysis was carried out. In addition variables were regressed using a model and all coefficients interpreted. The model took this form:

$$Y = \beta_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3 + \beta_4 \chi_4$$

Where: Y = Dependent Variable (Procurement Performance)

$\chi_{1-n}$  = independent variable ( $\chi_1$  is Procurement planning  $\chi_2$  is Staff competency ,  $\chi_3$  is Top management Support and  $\chi_4$  is Work Environment)

$\beta_0$  = the constant

$\beta_{1-n}$  = the regression coefficient or change included in Y by each  $\chi$

### **Correlation and Multiple Regression Analysis**

In this section, the results of inferential statistics are presented. For the purpose of assessing the objectives of the study, Pearson's Product Moment Correlation Coefficient and regression analyses were performed. With the aid of these statistical techniques, conclusions are drawn with regard to the sample and decisions are made with respect to the research hypothesis.

#### **Pearson's Product Moment Correlation Coefficient**

In this study Pearson's Product Moment Correlation Coefficient was used to determine whether there is significant relationship between Staff competency, Top management support and work environment with procurement performance. The following section presents the results of Pearson's Product Moment Correlation on the relationship between independent variables and dependent variable. The table below indicates that the correlation coefficients for the relationships between procurement performance and its independent variables are linear and positive ranging from substantial to medium level coefficients.

**Table 1. The relationship b/n Procurement performance & determinant variables**

Affecting factors	Correlations, probability values and sample size	Procurement Performance ( value of Correlations, probabilities and sample size)
Procurement performance	Pearson Correlation	.725
	P. value	.000
	N	68
Procurement planning	Pearson Correlation	.308
	P. value	.000
	N	68
Staff competency	Pearson Correlation	.360
	P. value	.000
	N	68
Top management support	Pearson Correlation	.421
	P. value	.000
	N	68
Work environment	Pearson Correlation	0**
	P. value	.000
	N	68

Correlation is significant at the 0.01 level (1-tailed).

The above table 1 provides a matrix of the correlation coefficients for the four variables. Each variable is perfectly correlated with itself and so *correlation* = 1 along the diagonal of the table.

Procurement performance is positively correlated to Staff competency with a Pearson correlation coefficient of  $r = .725$  and the significance value is less than .001. Hence, the researcher can gain confidence that there is a positive relationship between procurement performance and staff competency.

Procurement performance is positively correlated to procurement planning with a Pearson correlation coefficient of  $r = .308$  and the significance value is less than .001. Procurement performance is positively correlated to top management support with a Pearson correlation

coefficient of  $r = .421$  and the significance value is less than  $.001$ . Therefore, the researcher can say that there is a positive relationship between procurement performance and top management support. Procurement performance is not positively correlated to working environment with a Pearson correlation coefficient of  $r = 0$ . This shows that there was positive correlation between procurement performance and procurement planning, staff competency, and top management support but work environment is not positively correlated.

*Table 2. Regression Model Summary*

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>R SQUARE Change</i>
<i>1</i>	<i>.797</i>	<i>0.635</i>	<i>0.612</i>	<i>0.47482</i>	<i>.635</i>

*a. Predictors: (Constant), X4, X2, X3, X1*

*b. Dependent Variable: Y*

### **Multiple Regression Analysis**

Multiple regressions is a logical extension of these principles to situations in which there are predictors and each predictor variable has its own coefficient, and the outcome variable is predicted from a combination of all the variables multiplied by their respective coefficients.

The researcher conducted a multiple regression analysis so as to test relationship among variables (independent) on the factors affecting procurement performance in Wolaita Sodo University. The researcher applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study.

In table 2, according to the procurement users in Wolaita Sodo University the three independent variables that were studied, explain only 63.5% of the factors affecting procurement performance from the expectation of users of procurement service in Wolaita Sodo University as represented by the  $R^2$ . This therefore means that other factors not studied in this research contribute 26.5% of the factors affecting procurement performance in Wolaita Sodo University. Therefore, further

research should be conducted to investigate the other factors 26.5% % that influence the factors affecting procurement performance in Wolaita Sodo University. According to users perception, x1 procurement planning, x2 staff competency,x3 top management support has significant influence in the procurement performance of Wolaita Sodo university.

**Table 3 Multiple Regression model Coefficients**

		Unstandardized Coefficients	Standardized Coefficients				Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.32	0.363		0.662	0.511		
	X1 procurement planning	0.50	0.85	0.56	5.97	0.00		
	X2(Staff Competency)	0.26	0.097	0.372	3.10	0.00	0.91	1.099
	X3(Topmanagement support)	0.19	0.117	0.295	2.15	0.006	0.812	1.231
	X4(work environment)	-111	100	0.24	2.301	0.26	0.803	1.246

a. Dependent Variable: Y

### Multiple regression model

In table 3 the regression model below has established that taking four independent variables into account notably; procurement planning ,Staff competency, top management support, and work environment constant at Zero influences procurement performance (0.32). The results presented also shows that taking all other independent variables at zero, a unit increase in procurement planning leads to a 0.50 increase in procurement performance; a unit increase in Staff competency leads to a 0.26 increase in procurement performance; a unit increase in top

management support leads to 0.19. Increase in procurement performance; Inferences can therefore be made that procurement planning followed by Staff competency and top management support, determines procurement performance.

a. Predictors: (Constant), procurement planning Staff Competency, Top management support, and Work environment b. Dependent Variable: Procurement Performance.

From the regression findings, the substitution of the equation ( $Y = \beta_0 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$ ) becomes:  $Y = .0.32 + 0.50x_1 + .0.26x_2 + .0.19x_3$

Where Y is the dependent variable (Procurement Performance) X1 is procurement planning, X2 is Staff competency, X3 is top management support, and X4 is work environment. According to the equation, taking all factors Staff competency, top management support, and work environment constant at zero, Procurement Performance will be . 0.32.

From the results, procurement planning as a component of procurement Performance contributes most to the Performance of procurement, which has the greatest t value of 5.97, while work top management contributes the least, which has the smallest t value of 2.15.

### Hypothesis testing

Table 4. Test of hypothesis

Determinants of procurement	Sig	P- Values	Alternate hypothesis
Procurement planning	.000	$P < .05 < .000$	H1 is accepted
Staff competency.	.000**	$P < .05 < .000$ ,	H <sub>2</sub> is accepted
Management support	.0.006 **	$P < .05 < .0006$ ,	H <sub>3</sub> is accepted
Work environment	.0.025	$P < .05$ is not <.026,	<b>H<sub>4</sub> is rejected</b>

**Hypothesis-1** Procurement planning has a significant impact on the procurement performance. Procurement planning is accepted because  $.000 < P < .05$ .

**Hypothesis-2** Staff competency has a significant impact on the procurement performance of Wolaita sodo university. Staff competency is accepted because  $.000 < P < .05$ .

**Hypothesis-3:-**Top management support has a significant influence on the procurement performance of Wolaita Sodo University. So top management support is accepted because  $.006 < P < .05$

**Hypothesis-4:-**Work environment has not a significant impact on the Procurement performance of Wolaita sodo university is rejected because  $.26$  is not  $< P < .05$  which means Work environment has not significant impact on Procurement performance in Wolaita Sodo university

To summarize the hypothesis testing, among four determinant variables that affect procurement performance. Three factors are statistically significant influence on Procurement performance of Wolaita Sodo University, namely procurement planning staff competency and top management..

## **Conclusion**

The aim of this study was targeted towards researching the determinants of procurement performance in Wolaita Sodo University. The findings in this study revealed a significant positive relationship between procurement performance in Wolaita Sodo University and the following determinants: procurement planning ,Staff Competency and op management support

- ✚ The findings in this study revealed that there is a significant positive relationship between procurement performance and the following determinants: procurement planning, Staff Competency and Top management support. . This study is in line with the study by Kirande, J.o&Rothich G. (2014) ,oliveria and Martins (2011) and kayua, K.B. and Ngugi, K(2014).
- ✚ In the regression model that taking four independent variables into account notably; procurement planning ,Staff competency, top management support, and work environment constant at Zero influences procurement performance (0.32). The results presented also shows that taking all other independent variables at zero, a unit increase in procurement planning leads to a 0.50 increase in procurement performance; a unit increase in Staff competency leads to a 0.26 increase in procurement performance; a unit increase in top management support leads to 0.19. Increase in procurement performance; Inferences can therefore be made that procurement planning followed by Staff competency and top management support, determines procurement performance.

- ✚ According to the procurement users in Wolaita Sodo University the three independent variables that were studied, explain 63.5% of the factors affecting procurement performance from the expectation of users of procurement service in Wolaita Sodo University as represented by the R<sup>2</sup>. Therefore this means the studied variables accounts the majority share .
- ✚ There is also a positive relationship between procurement performance and the three independent variables in Wolaita Sodo University

### **Recommendations**

- ✚ Procurement is a skilled profession that requires well trained people. The appropriate authorities need to ensure that procurement function is managed by qualified staff to ensure performance.
- ✚ According to the procurement users in Wolaita Sodo University the three independent variables that were studied, explain only 63.5% of the factors affecting procurement performance from the expectation of users of procurement service in Wolaita Sodo University as represented by the R<sup>2</sup>. This therefore means that other factors not studied in this research contribute 26.5% of the factors affecting procurement performance in Wolaita Sodo University. Therefore, further research should be conducted to investigate the other factors 26.5% % that influence the factors affecting procurement performance in Wolaita Sodo University.
- ✚ The procurement staff in the university needs to have adequate professional qualifications in purchasing and supply/ supply chain management and be adequately trained and capacitated on the procurement procedures of the public procurement act and regulations. Workshop, seminars and short term training should be given to fill the skill gap of procurement staff. Strict follow up and supervision of top management also necessary to facilitate work in the university.
- ✚ Managers should consider adding value to employees through motivation, energy, intuition, creativity, persuasiveness and foresight since this will boost intelligence, self-confidence, determination, integrity and sociability which are important to procurement performance.

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# **Assessment of Factors Influence the Financial Performance of Small Micro Business Enterprise: the case of Wolaita Sodo Town**

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## **Abstract**

*This research deal with the assessment of factor influence the financial performance of small and micro business enterprise it has been try to evaluate small and micro business enterprises with the organization small and micro business enterprises financial performance that is established to provide small and micro business preparatory. The study try to identify the problem in relation to micro business enterprises and financial performance evaluation like improper utilization causes of variance between small and micro business enterprises. Data requirement for the research is hope to be satisfied through the collection of primary data using interview was collected from both primary and secondary source primary data was collected using both clothed and opened ended questionnaire and distributed to the selected business , related to financial performance small and micro business enterprises. Secondary data had been used from published and non-published document. Finally, based on the finding of the study it is expropriated recommendation has been given to micro business financial performance evaluation where imperilments need to be seen.*

**Key words: Micro finance, Performance**

## **Introduction**

### **Background of the Study**

The financial performance small and micro business enterprise (FPSMBE) found to play significance roles, particularly in development countries like Ethiopia. FPSMBEs play a role in the reduction of unemployment through job creation and poverty, alleviation, income generation and expansion of medium and large industry (Aqua and management sap B(2007))

Accordingly, financial performance micro and small enterprise (FPSMBE) use the during force to bring sustainable economic development that enables the country to be proceeds from agriculture industry small business is the back bone of economy in that they produce affordable enables the and services. Create proportion of jobs, and thus contribute significantly to countries development and economic growth. Britzka in kabuki john (2009).

While the contribution of (FSMBE) development is generally acknowledge. (Fpsm be) are forcing many obstacles that constraint their growth. Geberehiwot and woldy (2006) find that access to market and finance the most important constraints of FPSMBE) growth in Ethiopia the survey of the control agency (CSA, 2002) report that the FPSMBE in Ethiopia forced wide range of problems such as enforceable regulatory environment limited access to markets lack of finance information, business presses, the acquisition of skills and managerial expertise. Restricted access to technology and limited access to faulty business in Tran fracture.

The purpose of this study is to investigate constraining the financial performance of (FPSMBE) in wolaita sodo branch specifically, this study examine the extent to which management constraint. Limited government. Lack of appropriate technology. Lack of working premise. The source of obtain fund marketing for FPSMBES owners in determining dominantly affect their business performance and overcome the respective problem which affects their day to day operations before significantly resources divot. Thy study target on micro and small enterprise corporately register and perform the business wolaita sodo town.

**Statement of the Problem**

In most developing countries, face constraints both at startup phase and after their establishment. In Africa, for example the failure rate of BSEs is 85% out of 100 enterprises due to lack of skills and access to capital (fedhansi, 1997:170-186). It is typically of (FPSMBE) in Africa to be lacking in business skills and collateral to meet the existing

lending criteria of financial institution ( world Bank, 2004:29) this, according to world Bank has created finance gap in most markets. The (FPSMBE) are able to source and obtain finance mostly from the informal sectors like friends and relatives while medium or large enterprises obtain funds from banks. This unequal. Access to finance by (FPSMBE) and medium and large enterprises has undermined the role of (FPSMBE) the economic in Africa countries (World Bank, 2004:29)

The study conducted by Ethiopia CSA discloses that, the contribution in creating job opportunities and in the development of our economy is vital (fpsmbe) , 2006:13). However, their contribution is very low in compared with that of other countries due to financial problem lack working premises and raw materials lack of information about market opportunity and standards and regulations is one of the underlining factors that hinder their opportunities and standards (lack works 2009)

## **Objective of the Study**

### **General Objective of the Study**

The aim of this study is to investigate factors constraining the financial performance of the small of the small micro business enterprise in wolaita sodo town

### **Specific Objective of the Study**

- ❖ To identify the major factors that hinders the financial performance of small and micro business enterprises.
- ❖ To examine the main cause of the financial performance small and micro business enterprise.
- ❖ To forward the possible solution of the problems of the finance performance SMBE.

### **Research Question**

1. What are major factor that hidens the finance performance small and micro business enterprise?
2. How can examine the main causes of finical performance small and micro business enterprise?
3. What are the possible solution of the constraint financial performance small and micro business enterprise?

### **Scope of the Study**

The scope of the study is limited on assigned factors affecting the financial performance of micro and small enterprise in Wolaita Sodo town although there are delimited to government factor working premise technological. Intrastate market finance. Management and entrepreneurial factors

### **Significance of the Study**

The researcher expects the study to explore the factors that influence small and micro enterprise. The study will help organizations to go in a good way by alleviating the factors. Since the study extracts the problem and depicts it to the manager. This study is expected to provide baseline information concerning the problem faced by small and micro enterprises to contemporary researchers. It is believed that the study will clearly reflect the factors.

### **Limitation of the study**

In this researcher study, there would be a number of limitations. The great limitations of the study are lack of experience, the study factors are restricted within Wolaita Sodo towns, as well as short period of time allocation for data collection, not as to arrive sufficient information through personal observation.

In addition to this, few respondents will show interests to help and give reliable and adequate information. It could also be a limitation of the research.

### **Organization of the study**

This research has been composed in the following manner that contains five different chapters. The first chapter consists of the introduction such as background of the study, statement of the problem, and objectives of the study, significance of the study, scope of the study, limitation of the study, and organization of the study. The second chapter presents the theoretical and empirical related literature to the study, the third chapter consists of methodology of the study such as nature and sources of data collection, sampling techniques, methods of data collection and methods of data analysis and presentation. The fourth chapter forwards the results and discussion from the collected primary and secondary data sources. The last chapter is an important conclusion and recommendation about our final research. The appendix part consists of acronym table and reference.

## **Literature Review**

### **Theoretical View**

The chapter comprises of six sections these are definition of the role of FPMSEs in poverty reduction. The concept of business performance empirical study and factors that influence the performance of FPMSEs.

This chapter review work on FPMSEs in Ethiopia and other countries in general and wolaita sodo city particular works on performance and determinates of performance were also reviewed. This is to help to understand of the state of FPMSEs and its determines of the performance. This chapter comprise of nine sections. These are definitions of FPMSEs the role of FPMSEs in poverty reduction, the FPMSEs sector in Ethiopia the concept of business performance empirical studies factors that influence the performance of small and micro business enterprise assess to business information services and performance of FPMSEs access to financial in performance of FPMSEs technological input in payment system on performance of FPMSEs and availability of managerial experience on performance of FPMSEs.

### **Definition of Micro Enterprise**

The FPMSEs sector everywhere is characterized by highly diversified activities which can create employment opportunities for a substantial segment of the population. This implies that the sector is a quick remedy for unemployment and poverty problem. However, there is no single and universally acceptable definition of a small enterprise kayannual and quarter 2000- 35. This is so because the criteria and ways of categorizing enterprise as micro small form of development. Even with in the small country definition also change overtime due to changes in price levels. Advances in technology or other consideration (Ermine Let, 2009, 1-9).Firms measures of size (number of employees, turnover, profitability, net work, etc) when 12 capital investments as a yardstick, has Benn developed for formulating MSE development strange in 1997(mol, 1997-8-21).According to the official definitions of moll. Micro enterprises are business enterprises found in all sectors of Ethiopia economy with a paid up capital (fixed assets) of not more than birr 20,000, but excluding high technology consultancy firms and other high technology establishment (Mote, 1997, 8-21).

## **The Concept of Business Performance**

according to martin (2010, 67) performance is defined simply in terms of output terms such as quantified objectives or profitability, performance has been the subject of extensive and increasing empirical and conceptual investigation in the small business literature (Bidzakin K, J, 2009, 31). The issues that remain unresolved are the goals against which performance should be assessed and from whose perspective the goal should be established (Etzion, n, d, 128). Remain Alasdair and ahmedabdelrahim (2007,6-31) on their study defined performance as follows. The most commonly adopted definition of success (good performance) in financial growth with adequate profit. Other definitions of success good performance as the job satisfaction they derive from achieving desired goals. However financial growth due to increasing profit they has been widely adopted most researchers and practices in business performance models. Global entrepreneurship monitor (GEM) defined performance as the act of performance of doing something successful using knowledge as distributed from merely possessing it (GEM), 2004, 10). However, performance seems to be conceptualized operationized and measured in different ways making cross comparison is difficult (srinivasan et al, 1994, 22).

## **Empirical Study**

According to mead and liedholm (198, 69) and swierzek and Ha (2003,46-58). The main factors that affect the performance of MSEs in developing countries is not their small size but their isolation, which hinders access to markets as to information financial and institutional support the argument that small business in Africa are crucial in the role they play in in employment creation and general contribution to economic growth is not new although this may be true the vast majority of new enterprise tend to be one – operation establishment (mwega, 1991, 33-36) various reasons for these failures have been proposed by scholars including lack of supportive policies for MSEs development (McCormick, 1998, 26-27), intense competition with replication of micro – business management characteristic including lack of skills and experience ( Katwalo and medicine, 2008, 337-348).

## **Factors that Influence the Performance on MSEs**

### **Financial Constraints**

Traditional micro economic theory treat finance as cooperate factor of production. Previous studies have shown a lack of finance resources hamper the growth of small business. However the degree to which limited financial resources along obstacle to business growth indubitable agenda among prior researchers, (Gob sell, 1991) finding show that additional capital lack financial resources is often not required to carry out a successful business activity and the lack of capital can be compensated through creativity and initiative another study (mahadea, 1996). Found that the financial constraints significantly negative when related to the rate of growth for the business. A research on small and medium sized firm in Nairobi (Mc Mahon, 2001) has revealed that initial capital more than any other firm level variable explained the size of the government business. This means that lack of credit to obtain the needed physical capital is likely to limit business growth, MSEs cite the lack finance as the greatest constraints to their growth and development, whether they are formally registered or not. The financial needs of different of micro and small enterprise vary widely with problem particularly sever for startup enterprises (Mote, 1997). In this regard the formal financial institution is reluctant to avail credit facilities to the sector. This standards of operation waiting time they take to sanction loans unfavorable disposition towards small loans due to high administrative costs involved in financing them and stiff and limited collateral is a major case of small business failure most owners do not management experience and a adequate training and skill to operate a business. Therefore a lack of management training and experience has negative consequence and has led to the collapse of many businesses (okpera, 2011, Eshetu and Zeleke, 2008, Opera and Wynn, 2007).

### **Technological Constraints**

Another major constraints and handicap that influenced the growth of MSEs is in accessibility of appropriate technology. This applies to both ends of the technology spectrum, Viz sophisticated or appropriate identifying and selecting appropriate technology that support the existing activity for MSEs operating in the labor intensive and low skill spheres needs more attention. Rapid changes in technology would be responded by MSEs to find alternative ways to sustain competitive advantage by deploying new process and new growth methods. Technology many play an important role in this respect. In this context technology has close relationship with

improvement of production process. Previous study has revealed that lack of equipment and out dated technology is among hindrances of small development (Jones and parry, 2010). In their study, technological change innovations had significant relationship with MSEs growth technology barriers the negatively affect the success of small. It is argued that the firm that adopted modern technological tools in their business are more likely to cause a business to grow faster. This is because modern tools enable efficiency and effectiveness to be achieved in doing business and they are weak in term of context which is the result of using in advance technology not maximizing machinery utility and not improving. Many owners are not aware of applying the appropriate types of technology in their business and they do not have ability to choice the appropriate technology for their business. It is crucial for small firms to make the most strategies business decision hence government support of technology initiative and networks with research institution should assist small business enterprises in term of using appropriate technological (Jones and parry, 2011).

### **Governmental Constraints**

Much governmental in the world (eg, chst, 1992, Mulheim, 1996) has been paying a more attention to small business development in order to strengthen national economy. Most of development country like Ethiopia government pays attention to micro and small enterprises (Mulu, 2007) through ministry trade and industry and launched many programs government support is necessary condition to foster MSEs development. Government policies to be one of the top problems focused small business. In additions to lack of financial support as above mentioned lack of institutional support was of hindrance of MSEs Development (industry and lengberge, 2005, mead and liedholm, 1998, swierezek and Ha, 2003). Moreover there is a matter of government policy concerning MSEs the policies there but they aren't really benefiting the majority in developing countries.(Okpra and Wynn, 2007) the government has discovered the importance of small firms in boosting the economy. Government support in promoting growth of MSEs in the form of loan at subsidized interest rate free or subsidized information and advice insuring smaller firms to get share of government contracts are limited acquit and mossimanegape, 2007) found in adequate government support affect success factor for small business.

## **Research Methodology**

### **Research Design**

This study would be employed cross sectional study designs because data area collected at one point in a time asses the financial performance of small and micro business enterprises.

### **Target Population**

In this research would be use to study population are wolaita sodo town financial performance small and micro business enterprises. They are 149 financial performance small micro business enterprises in different sectors such as construction service trade and urban agriculture.

### **Sample Size and Techniques**

According to Catherine Dawson (2009, 54) the correct sample size in study is dependent on the nature of the population and the purpose of the study. From total study population which means 149 I would be take 60 sample size because of cannot of them individuals and households un this case would be use sample random sample method and take sample together full and well organization data from selected respondents.

### **Data Source and Data Collection**

The study would be conducted by using both primary and secondary sources of data. The primary data would be collected through questioner and observed but questioner is the dominate part primary source of data. The secondary data would be collected office manuals variety.

### **Methods of Data Analysis and Presentation**

After gathering all require of quantitative data and qualitative data information data analysis would be performance and presents through present's descriptive statics (frequency and percentage).

## Data Presentation Analysis

### Section the characteristic demographic factors table presentation

**Table 1 gender**

Sex	Frequency	Percentage
Male	42	70
Female	18	30
Total	60	100

Source, own, 2018

The above table shows that 70% of sample size survey for the study is males and the rests of 30% of the female in financial performance small and micro business owners were males the gap come from not creating suitable working condition for female related with financial performance of small business.

**Table 2 Age**

Age	Frequency	Percentage
16-25	18	30
26-35	31	52
36-45	8	13
Above 46	3	5
Total	60	100

Source, own, 2018

As can be seen from the age 30% the respondents are 16-25 years 52% the respondents with 26-35 years 13% of the respondents 36% with 36-45 years and remaining 5% of the respondents are about 46 years. Financial performance small and micro business enterprises are youth age this helps to performance their business accurately and produce high amount of product..

**Table 3 Education qualification**

Education qualification	Frequency	Percentage
Illiterate	3	8
1-12	9	15
Certificate	10	17
Diploma and above	36	60
Total	60	100

Source, own, 2018

As show can above the table 8% and respondents are illiterate 15% of the respondents are 1-8 grade 10% of the respondents are 9-12 grade 17% of the respondents are certificate 60% of the respondents diploma and above but same financial performance small and micro business owners illiterate result difficult to adopted new technology lack of book keeping record etc.

**Table 4 marital status**

Marital status	Frequency	Percentage
Married	22	37
Single	35	58
Widowed	3	5
Total	60	100

Source, own, 2018

As indicated in the above table 37% of the owners have married, 58% the owners have single and micro business enterprises is single.

**Table 5 source of finance**

Source of financial	Frequency	Percentage
Personal saving	28	47
Bank	11	18
Family and friend	21	35
Total	60	100

Source, own, 2018

As indicated in the above table 47% of owners sources of financial have performance saving 18% of the awareness sources has banks and the remaining 35% source finance from banks are family and friends. In small and micro business enterprises sources of finance from banks are very low compares to other means of finance. Because of banks as collateral, if they have not get money from personal saving family and friends they are not start the business.

**Table.6 kind of business**

Kind of business	Frequency	Percentage
Wood and materials	11	18
Cobble stone	7	12
Poultry and cattle fattening	5	8
Trade	21	35
Maintenance	16	27
Total	60	100

Source, own, 2018

As can be seen from table 18% of the respondents people business are retail trade 27% of the respondents operate the business are maintainers 8% of the respondents operate the business wood metal 35% of the respondents operate business are cattle stone and the rest of 8% performance sector constructions and urban agricultural sector. Trade sectors is the dominate one. Partial trade is the part of sector high compare to the other business like wood and metal cobble stone etc.

**Table 7 Business Experience**

Business Experience	Frequency	Percentage
Less than 2 years	9	15
2-5 years	27	45
6-10 years	14	23
11-15 years	6	10
More than 15 years	4	7
Total	60	100

Source, own, 2018

As show on the above table 45% have operation 2-5 years 23% of the respondents 6-10 years 15 years less than 2 years 10% are 11- 15 years and the remaining 7% are more than 15 years. In the years this show they are not more experience in the business. As a result they are not create many customers and they get low profit.

**Table 8 Financial performance measurement of the business**

Financial performance measurement of the business	Frequency	Percentage
Using sales	22	37
Using number of customers	23	55
Using number of employees	5	8
Total	60	100

Source, own, 2018

From the study finding majority of 55% respondents say that they measure the performance of the business numbers of customer 37% measure using sales and the remaining 9% measure using the number of employees in this shows most of financial performance small and micro business enterprises they performance by using of number of customer. The first aim is to create many customers and then performance then increase their sale volume decrees storing costs of product and protect goods from obsolescence.

**Table 9 Financial Factor**

Question	Options	Respondents	
		Frequency	Percentage
There is lack of sufficient capital to maintain and expand the business	Strongly agree	27	45
	Agree	14	23.4
	Undecided	5	8.3
	Disagree	5	8.3
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

The majorities of the respondents are strongly agree in small and micro business enterprises have not adequate capital purchase raw materials, machinery equipment for this reason the capacity and the sales volume decreases.

Question	Options	Respondents	
		Frequency	Percentage
There is in adequacy of credit institution	Strongly agree	9	15
	Agree	14	23
	Undecided	14	23.5
	Disagree	19	23.5
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

From the study finding the majority of the respondents are undecided disagree and agree in adequacy of credit institution have effect small micro business enterprises because they cannot get money easily and its difficult to operate the business if it not have available lending institution.

Question	Options	Respondents	
		Frequency	Percentage
There is shortage of working capital	Strongly agree	18	30
	Agree	14	23.5
	Undecided	5	8
	Disagree	9	15
	Strongly disagree	14	23.5
	Total	60	100

Source, own, 2018

As indicate on the above table the majority of the respondents are strongly agree in small and micro business owners lack of sufficient capital to operate day today activity like operating expenses, payment of the employees and materials purchase etc so it is difficult to continue the business if they have not sufficient working capital.

**Table 10 Technological factor**

Question	Options	Respondents	
		Frequency	Percentage
There is lack of appropriate machinery and equipment	Strongly agree	9	15
	Agree	19	32
	Undecided	14	23
	Disagree	9	15
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

As shown the above table the large proportion of small and micro business owners are agree there is no sufficient machinery and equipment it is difficult to produce high amount of product and decrees sales volume and decrees their profit.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of money to acquire new technology	Strongly agree	5	8.3
	Agree	26	43.3
	Undecided	2	3.4
	Disagree	18	30
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

The majority of the respondents are strongly agree small business cannot have sufficient money to purchase new technology it leads to their business not produce high amount of product and it requires many labor force and it requires more time to operate the business, because they cannot purchase or recent technology.

Question	Options	Respondents	
		Frequency	Percentage
The existing technology old and out date	Strongly agree	28	47
	Agree	9	15
	Undecided	12	20
	Disagree	2	3
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

The majority of the respondents are strongly agree. The existing technology is not recent they cannot produce quality product decreases production volume decreases sales volume and it requires time compare to the latest technology.

**Table 11 management factor**

Question	Options	Respondents	
		Frequency	Percentage
There is lack of training on inventory management	Strongly agree	5	8.3
	Agree	18	30
	Undecided	5	8.3
	Disagree	18	30
	Strongly disagree	14	23.4
	Total	60	100

Source, own, 2018

In small and micro business owners have not sufficient inventory management the management cannot learn or give training how to manage the inventory and use wisely for the employees from this view, they uses excessive inventory for production or obsolete of inventory.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of good decision making skills	Strongly agree	15	25
	Agree	9	15
	Undecided	9	15
	Disagree	18	30
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

Management is not done well decision to the employees it is affect the overall business such as related to purchase sales in general the management is an important role the development of small business sector but the manager cannot give decision to the employees they lead to their business fail down.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of communication skill	Strongly agree	5	8.4
	Agree	9	15
	Undecided	14	23.3
	Disagree	18	30
	Strongly disagree	14	23.3
	Total	60	100

Source, own, 2018

From the study finding the above table show the majority of the respondents are undecided but it does not mean that all managers have good communicate to the employees and supplies etc managers cannot communicate to the customers employees and intermediates cannot product many product they cannot many customers and it is difficult to sale their product.

Question	Options	Respondents	
		Frequency	Percentage
There is poor supervision of employees	Strongly agree	5	8
	Agree	18	30
	Undecided	19	32
	Disagree	9	15
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

As indicate the above table the majority of the respondents are strongly agree. The managers have a responsibility to manage the employees unless they cannot do their work wisely simply the employees work carelessness or negligence is also to expose to the workers have fraud or cheating and also the absence of honesty.

**Table 12 marketing factor**

Question	Options	Respondents	
		Frequency	Percentage
There is lack of demand forecasting	Strongly agree	5	8.3
	Agree	23	38.3
	Undecided	9	15
	Disagree	14	23.4
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

From the above table show that majority of the respondents are agree small and micro business have not capacity of demand forecasting they can not to estimate sales volume production cost volume of production and profitability etc. this implies that in small business owners have exposes to loss and discontinue to their business.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of marketing in formation	Strongly agree	4	7
	Agree	32	53
	Undecided	5	23.4
	Disagree	14	8.3
	Strongly disagree	5	23.4
	Total	60	100

Source, own, 2018

From the study finding the majority of the respondents are agree this show that small and micro business owners have not sufficient information such as they do not known their product price in the market they do not known the demand of their product in the market they do not known information about their competitors.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of promotion to attract potential users	Strongly agree	5	8.3
	Agree	32	53.3
	Undecided	16	26.7
	Disagree	2	3.4
	Strongly disagree	5	8.3
	Total	60	100

Source, own, 2018

From the study finding the above table shows the highest portions of the respondents are agree small and micro business owners cannot attract the customers by give special incentive by produce quality products by decreasing sales price and understand what the customers demand and interest. These shows small and micro business owner can generate profit and cannot exist last in the business.

**Table 13 government factor**

Question	Options	Respondents	
		Frequency	Percentage
There is lack of tax incentives	Strongly agree	13	21.7
	Agree	14	23.3
	Undecided	14	23.3
	Disagree	5	8.4
	Strongly disagree	14	23.3
	Total	60	100

Source, own, 2018

The government cannot give tax incentives the employees by create the opportunity of tax holiday or one years or two years tax exempted until their business have sufficient capital and to produce adequate product. These leads their business fails down in the starting point and incur loss.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of financial support	Strongly agree	18	30
	Agree	18	30
	Undecided	5	8.3
	Disagree	14	23.4
	Strongly disagree	5	8.3
	Total	60	100

Source, own, 2018

As indicate the above table shows that the highest portion of small and micro business owners have strongly agree and agree. That means the government cannot create a means of get finance

from small business owners. The government cannot an opportunity to get money from saving and credit institution, so it is difficult to start the business of small and micro business owners.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of easy to licensing	Strongly agree	14	23.3
	Agree	14	23.3
	Undecided	21	35
	Disagree	2	3.4
	Strongly disagree	9	15
	Total	60	100

Source, own, 2018

Indicate the above table the majority of the respondents is small and micro business owner are undecided but it does not mean that all small business owners have easily get licensing. The government cannot give licensing to small owners small and micro business enterprises cannot start business and unemployment and it expand and hinder the overall growth of the country.

Question	Options	Respondents	
		Frequency	Percentage
There is lack of logistic and retail out late location	Strongly agree	23	38.3
	Agree	9	15
	Undecided	2	3.4
	Disagree	3	5
	Strongly disagree	23	38.3
	Total	60	100

Source, own, 2018

In small and micro business enterprises have not sufficient warehousing or storing from the goods or service it also not adequate place to sales their products this shows difficult to run their business efficiently and effectively.

## **Concussion and Recommendation**

### **Conclusion**

They were conducted on the financial performance of small and micro business in wolaita sodo town. As it is stated in the analysis parts the number from questionnaire based on the finding the research conclude the following.

The majority of respondents were found to be male small and micro business owners and the majority is respondent's small micro business owners were youth age between 26-35 years.

The majority of respondents small, and micro business owner's educational qualification were diploma and above the large proportions of small business owners marital status were single and followed. The main sources of part up and expansion finance or funds from personal saving follow by family and friends. The formal financial institution has not able to meet the credit needs of the financial performance SMBs science collateral requirements most SMBEs have been forced to use the informal institution for credit. But the supply of credit form the micro business enterprise in the majority of small business owners involves retail trade. maintenance , and wood and metal respectively, they majority of small and business owner's business experiences are between 2-5 years, this shows they are not more experiences in the business. The majority of small and micro business owner's expresses their performance or success using numbers of customers and followed using sales. This shows the primary motive of small is to create many customers this implies that increase sales volume.

The most external factors identify as: financial factor, technological management factor, marketing factor, governmental support sector etc. financial factor their lack of sufficient capital to maintain and expand the business and there is shortage of working capital is the major factor that influences the financial performance of small and micro business owner's among technological factor : the existing technology old and out date and lack of appropriate machinery and equipment are the major obstacle of the financial performance small and micro business owner's among marketing factor the lack of promotion to attract potential users and lack of

marketing information are the negative influence the financial performance of small and micro business owner's among working place factor : the current working place is not convenient and the rent house is high are the major factor that hinder the financial performance of small and micro business owner's.

### **Recommendation**

Based on the finding and conclusion. The researcher recommended as the main objective of the study to examine the major constraints that influence of the financial performance of small and micro business enterprises. They investigators provide recommendation for three stake holders of the study. Such as small and micro business owner's financial institution (bank and micro finance) and governments.

#### **Owner's**

The small and micro business enterprises owners have to prepare credible business that embrace clear vision mission detail analysis of strength weakness opportunity and threats of the business. Well- convinces business. Plan is the most essential document involve when starting building. And managing a business. It is an important tool for rasping capital a base to realize objective. Develop products or market and to create conducive business involvement. Hence business plan is essential for SMBEs owner increasing their financial performance and service in the business in should get marketing information from potential uses and competitions.

#### **Government**

In adequate government support are the obstacles of small and micro enterprises in wolaita sodo town. In order to reduce this problem. Wolaita sodo town small and micro business enterprise agency should provide equipment. Machinery, contentment working place, house. Sufficient electric city, water and quick transportation service which would make SMBEs successful.

#### **Financial institution**

The survey removals constrains exits in wolaita sodo town to overcome this problem banks should in part play a role by providing loans, service for SMBEs at affordable collateral equipment, similar micro finance institution should provide sufficient loans and properly supervise and assess whether the borrowers effectively and efficiently utilizing money in proper manner. Besides. SMBEs owners who default in the loans acquired from landing institution must

be penalized by laws. This may help as for encouraging borrowers and lenders to confirm with the loan agreements.

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## **Factors Affecting the Growth of Micro and Small Enterprises in Hawassa City, SNNPR, Ethiopia**

**Wubneh mulugeta**

### **Abstract**

*This research aims to identify factors affecting the growth of MSEs with a special attention to manufacturing, service, construction, trade and urban agriculture sectors in Hawassa City, SNNPR, Ethiopia. In order to meet the objectives of the study, data collected through questionnaires were analyzed using statistical analysis such as descriptive and inferential analyses. The information gathered through the questionnaire from a sample of 236 operators and face-to-face interviews were conducted with 2 respondents from officers; i.e. process owner and another from expert working at the center of office of Hawassa City Job Creation and Food Security. The sample MSEs were selected using stratified and simple random sampling techniques. Information from an interview was analyzed using descriptive narration. Furthermore, the approach that was followed in this particular study was quantitative and qualitative. The technique applied was a standardized closed-ended questions and face-to-face interview. In addition, the data those were collected and analyzed using a statistical package for social sciences where tables were utilized for presentation of the results. The findings indicated that among the independent variables: lack of Selling premises, Consultancy, lack of Working premises, Political environments, Marketing, Access to Finance and resource and Opportunities indicators were the major factors that significantly affect MSEs growth. Based on the findings, it was recommended that government and concerned stakeholders should improve a centrally managed marketing sites that will equally give access to market, establish independent consultancy service so that MSEs can get regular follow up and trainings to sustainably survive and grow, pave opportunities so that MSEs can have easy access to diversified opportunities schemes with easy access to resources and finance in order to improve growth and contribute their share in the economy in Hawassa City. The findings further revealed that the government was not doing enough in terms of the growth of SMEs in Hawassa City administration as most of the respondents were complaining about the stringency of the government support and regulations pertaining to MSEs. Hence the government bodies and other stakeholders have to work together in order to solve problems.*

**Keywords: Micro and Small Enterprise (MSEs), Growth, Factors, Selling Premise, Consultancy, Marketing, Working premise, Opportunities, Access to Resource and Finances, Hawassa City.**

## **Introduction**

### **Back ground of the study**

MSEs are the engine that drives world economies and the stepping stone to industrialization, both for developing and developed economies. For instance, Small business constitutes a major force in the U.S. economy. There are more than twenty-seven million small businesses in this country, and they generate about 50 percent of gross domestic product (GDP). The millions of individuals who have started businesses in the United States have shaped the business world as we know it today. Some small business founders like Henry Ford and Thomas Edison have even gained places in history. Small business constitutes a major force in the U.S. economy (U.S., S.B.A, 2011).

In the United Kingdom (UK), they are associated with 62% of total employment and 25% to GDP (Burns, 2001; Day, 2004). Like UK, MSEs contribute 79% of Italian employment, 63% and 60% of France and Germany employment respectively (Burns, 2001). In China, MSEs employ 80% of urban population and contribute 60% of GDP (Sham, 2014).

In Ethiopia, MSEs are the second largest employment generating sector next to agriculture. A National survey conducted by Central Statistics Agency indicates that more than 1.3 million people in the country are engaged in MSE sector. The promotion of MSEs is one of the strategic directions Pursued by the government during the GTP implementation period (2010/11-2014/15), focusing on promoting the development and competitiveness of MSEs (Dagmawit, Yishak, 2016).

SNNPR comprises of the different Ethnic groups living where almost the country's most languages are being spoken, SNNPR constitute the largest bio diversity population, and enriched with lakes, rivers; vegetables, fruit all organic necessities vital to human survivals are all distributed to the central city from SNNPR, beside, the State constitutes, MSEs sectors operating in different business, though their huge contribution in absorbing unemployment, MSEs face challenges.

Few empirical efforts have been done to study growth of MSEs in Hawassa City. The existing knowledge gap and the focus for the sector development motivated the researcher to analyze empirically factors associated with growth of MSEs in Ethiopia, specifically in southern Ethiopia, Hawassa City. So that, this work is designed to fill the research gap of MSEs existed in

Hawassa City Sub cities and find out factors specifically affecting growth of MSEs (Demisew, 2018)

### **Statement of the problem**

The growth of MSEs has been seen in the recent past of great concern to many government policy makers and researchers globally because of realization of their economic contribution to Gross Domestic Product (GDP). As such they are no longer viewed as “stepping stones” to real business but as a means of industrial and economic growth and as well as tools of poverty eradication (EEA, 2014).

In Ethiopia, MSE is one of the sectors given recognition in the country’s industry development plan, and believed that it serves as vehicles reducing poverty and unemployment at urban center and as it reinforce the economic development. As specified in Ethiopian government national plan, the industrial strategy has given outstanding focus to strengthen micro and small enterprise. This is because it’s believed that they are the foundation for the establishment and expansion of medium and large scale industries; and open up opportunity for urban employment generation, expansion of urban development, and provide close support for further agricultural development (GTP I, 2010).

Most MSEs in the country lack the capacity in terms of qualified personnel to manage their activities. As a result, they are unable to publish the same quality of financial information as those big firms and as such are not able to provide audited financial statement, which is one of the essential requirements in accessing credit from the financial institution (Demisew, 2018).

Another issue has to do with the inadequate capital base of most MSEs in the country to meet the collateral requirement by the banks before credit is given out. In the situation where some MSEs are able to provide collateral, they often end up being inadequate for

the amount they needed to embark on their projects as MSEs assets- backed collateral are usually rated at 'carcass value' to ensure that the loan is realistically covered in the case of default due to the uncertainty surrounding the survival and growth of MSEs (Binks et al., 1992).

In Ethiopia, particularly in Hawassa; Studding factors affecting the growth of MSEs are not new, empirical studies for example, Arega, Muhammed & Daniel, (2016), have shown of factors affecting the growth of MSEs are structural, institutional and economic in nature, lack of capital, working premises, marketing problems, shortage of supply of raw materials and lack of qualified human resources are identified the most pressing problems facing MSEs. Another empirical study by Gemechu & Teklemariam, (2016), has come up with similar findings.

And in this study, in addition to those factors affecting MSEs growth, the investigator has seen MSEs Consultancy as one factor of affecting the growth of MSEs, and more attracted to see it's impacts for most of the researchers have not included yet as one factor affecting growth of MSEs in Ethiopia, particularly in Hawassa

Though, there is a progress on the contribution of MSEs to the economy, large number of MSEs are eventually closed or stagnated at starting phase. As reports and studies documented, there are internal and external factors which affect the growth of the MSEs such as lack of entrepreneurial skills, poor location of business cites, startup capital, lack of infrastructure, financial access and over emphasis to short term profit are internal and external factors affecting the growth of MESs. Beside the above major problem identified, they add as most of them get in adequate consultancy services, following little access to credit sources, the process of getting credit from micro finances are hectic. Therefore; in this study the investigator has seen factors affecting the growth of MSEs in Hawassa City.

## **Objective:**

### **General Objective**

The general objective of the study is to identifying Factor Affecting the Growth MSEs, Hawassa City, SNNPR

### **Specific Objectives:**

The study has the following specific objectives:

1. To examine the major factors affecting growth of MSEs in Hawassa City;
2. To evaluate opportunities to growth of MSEs in Hawassa City;
3. To examine the roles of MSEs coordinating office to the growth of MSEs in Hawassa City;

### **Significance of the study**

SMEs have taken a centre stage in the social and economic development of many nations. In Ethiopia, MSEs in both formal and informal sectors have long acted as engines of economic growth. They are regarded as the seedbed for the development of large companies and are the life blood of commerce and industry at large. The findings of this study will be useful to the stakeholders including; Government, MSEs, policy makers, legislator and NGOs.

#### **To the Government:**

The government can use the findings of this study to assist in policy formulation and development of a framework for critical management, finance, marketing, work premises, selling premises, opportunities to MSEs and other factors that affect the growth of MSEs.

#### **To Academics/Researchers**

Findings from this study assist academicians in broadening of the prospectus with respect to this study hence providing a deeper understanding of the critical challenges that affect the growth of MSEs in Ethiopia, particularly in Hawassa City.

#### **To MSEs:**

The findings of this study help MSEs in Hawassa City and others, within an insight into the benefits of using different factors studied in this research to predict the challenges that affect the growth of their entities. The study has recommended the alternative solution to factors affecting MSE growth, so as MSEs sees enlightenment to their business.

### **To Policy Makers and Legislators:**

The findings of this study will be used by the policy makers' and legislators to suggest recommendations and frame a scientific skeleton where MSEs in Ethiopia particularly in Hawassa city, be contained in a sustainable way. The study helps them to focus with identified factors as signals to support MSEs with policies and promotion. Moreover, the findings of this study help them and financial institutions on how to encourage establishing or expanding MSEs. It also enables them to know what kind(s) of policies should be framed.

### **To NGOs:**

Compared to other sectors, NGOs are more reluctant to give support to MSEs or look after them. The findings of the study help to attract NGOs' attention, for the study exploits problems which tackle the growth of MSEs and they will be more interested to support them in the areas of training, consultancy in a closer way. Now days, most NGOs are not seen while directly supporting MSEs, after this study, they will figure out in what directions they might give support to MSEs in Hawassa City.

### **Scope of the study**

The study assessed challenges affecting the growth of MSEs in food Hawassa city. Although, there are different issues that could be researched in relation to MSEs, this study was delimited to the management and expertise factors, consultancy factors, political environment, working premises, selling premises, marketing, access to financial and resources, and indicators of opportunities factors. Besides, the scope of this study spread across MSEs especially in the business sector of Hawassa city; Factors Affecting the Growth of MSEs, SNNPR, in case of Hawassa City.

### **Limitation of the study**

#### **Limitations**

Like all research, this study had limitations. The sources of difficulties encountered in this study were described as follows:

This study was limited in a sense that it ignored the recent trends in the economy (as to say the world financial crisis impacts to MSEs). The study analyzed only the general challenges affecting the growth of MSEs in Hawassa City, and does not considered challenges of Medium enterprises.

And moreover, from SNNPR state only Hawassa City is chosen purposively as the study area; for other cities in SNNPR are not included this is also considered as the second limitation of the study.

## **Research methodology**

### **Description of the Study Area:**

**Hawassa** is a young town, 56 years old, and can be considered as one example of developing cities in Ethiopia. The city is the capital city of the Southern Nation Nationalities and Peoples' Regional State (SNNPRS), in the Great Rift Valley located on the shores of Lake, 275 km south of Addis Ababa via Debre Zeit, 130 km east of Sodo, 75 km north of Dilla and 1125 km north of Nairobi. The city, which is the economic and cultural hub of the region, has a total area of about 50 km square and divided into 8 sub-cities (*kifle ketema*) and 32 villages / *Kebelles* each having its own administration offices. These are *Misrak* Sub city, *Menaheria* Sub city, *Tabor* Sub city, *Mehal Ketema* Sub-city, *Haik Dar* Sub city, *Addis Ketema* Sub city, *Bahel Adarash* Sub city, and *Hawella Tulla* Sub city. In this study, all sub-cities in Hawassa have chosen to address the objectives.

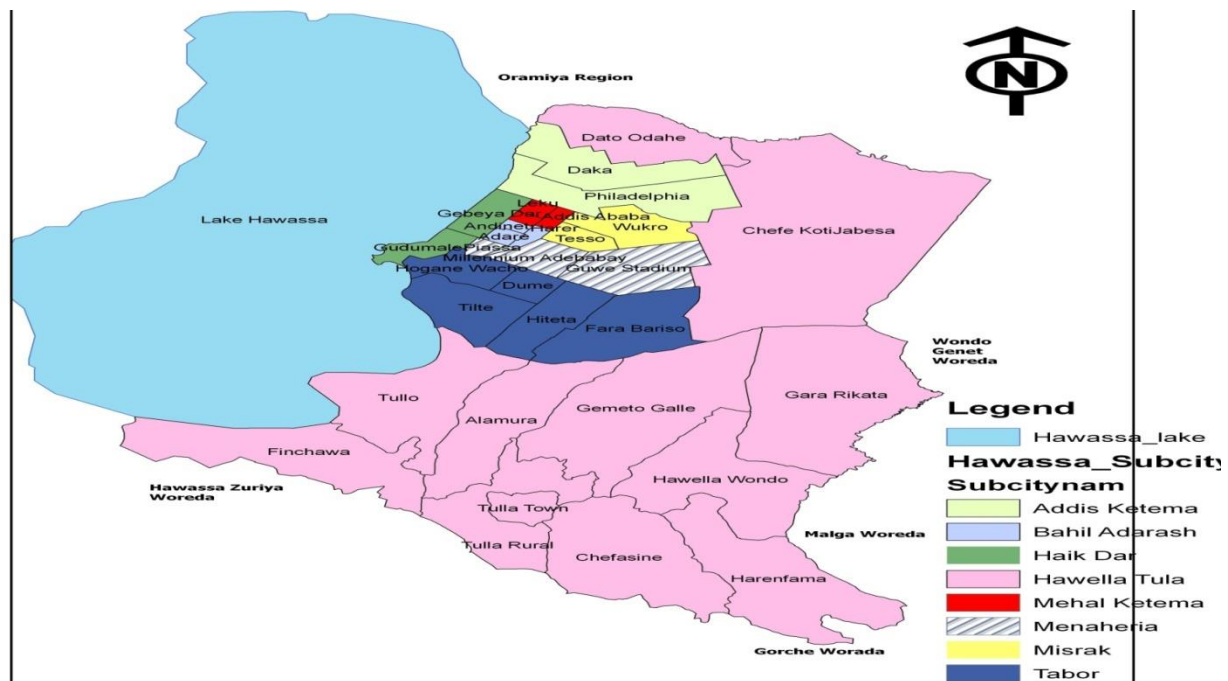
Hawassa was capital of the former Sidamo Province from about 1978 until the province was abolished with the adoption of the 1995 Constitution. This city is home to Hawassa University (which includes an Agricultural College, a Main Campus and a Health Sciences College), Awasa Adventist College, and a major market. The city lies on the Trans-African Highway 4 Cairo-Cape Town, with a latitude and longitude of 7°3'\_N 38°28'\_E Coordinates: 7°3'\_N 38°28'\_E and an elevation of 1708 meters.

### **Demography:**

Based on the 2013 Census conducted by the Central Statistical Agency of Ethiopia, this zone has a total population of 225,700. While 157,879 or 61% are living in the city of Awassa, the rest of population of this zone is living at surrounding rural kebeles. A total of 61,279 households were counted in this zone, which results in an average of 4.22 persons to a household, and 57,469 housing units.

The five largest ethnic groups reported in this Zone were the Sidama (48.67%), the Amhara (15.43%), the Welayta (13.9%), the Oromo (5.21%), and the Gurage (4.33%); all other ethnic groups made up 12.46% of the population. Sidamo is spoken as a first language by 47.97% of the inhabitants, 31.01% speak Amharic, 9.58% speak Welayta, and 2.07% Oromiffa; the remaining 9.37% spoke all other primary languages reported. Regarding the religion profile, 59.71% of the population said they were Protestants, 26.99% practiced Ethiopian Orthodox Christianity, 8.14% were Muslim, and 3.78% embraced Catholicism.

**Map of The Study Area:**



## **Research Design**

Qualitative and quantitative research approaches were used to evaluate Factor Affecting the Growth of MSEs in Hawassa City.

According to Kothari (2004) the quantitative approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion. However, qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is a function of researcher's insights and impressions. Interviews were used as the qualitative tool to explore the themes and apply the knowledge and beliefs of the respondents about Factors Affecting the Growth of MSE.

## **Data Type and Sources**

To undertake this research, both primary and secondary sources of data were used. To understand Factors affecting the growth of MSEs in Hawassa City; Primary data from MSEs were gathered through structured questionnaire and unstructured interview to some MSEs owners. This provided an Opportunity of getting reliable data, and a chance for the interviewer and interviewees to have better interaction and clarification of issues. To encourage meaningful participation of respondents the questionnaire were kept simple and precise.

## **Sampling Techniques**

The study has used the following sampling technique to select town, sub cities and population. Hawassa City has purposively selected by the researcher as the study area, this is because of the concentration of MSEs in the city and moreover; all existing Eight (8) Sub Cities in Hawassa have selected namely: Mehal Ketam Sub City, Hayk Dar Sub City, Tula Sub City, Menehariya Sub City, Misrak Sub Sity, Tabor Sub City, Bahel Adarash Sub City and Adis Ketema Sub Cities. After

## **Sample size Determination**

To draw representing sample from the population, for the population number has already known, Tabor Yamane (1967), sample determination formula were used and the representative sample from the population and from each fields were drawn in the following way.

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

Where  $e = 6\%$

Where,  $n$  is the sample size,  $N$  is the population size which is MSEs in the study area with 94% level of confidence and  $e$  is the level of precision assumed to be 6%.

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

$$n = \frac{1550}{1+1550(0.06)^2} = 236$$

Eventually using census method the 236 selected MSEs owners and managers were the respondent in the study.

**Table-3.5.1: MSEs Population and Sampling Distribution.**

Sub City	MSEs Fields of Operation						Total
	Construction	Service	Trade	Manufacturing	Urban Agriculture		
<b>Tula</b>	Population	19	71	35	15	32	172
	Sample	3	11	5	2	5	26
<b>Menehariya</b>	Population	29	27	20	39	19	134
	Sample	4	4	3	6	3	20
<b>Misrak</b>	Population	21	28	28	15	28	120
	Sample	3	4	4	2	4	17
<b>Bahil Adarash</b>	Population	18	50	24	12	46	150
	Sample	3	8	4	2	7	24

<b>Mehal Ketema</b>	Population	46	93	44	24	51	258
	Sample	7	14	7	4	8	40
<b>Haik Dar</b>	Population	29	80	55	24	36	224
	Sample	4	12	8	4	6	33
<b>Adis Ketema</b>	Population	21	27	28	33	39	148
	Sample	3	4	4	5	6	23
<b>Tabor</b>	Population	84	90	75	50	45	344
	Sample	13	14	11	8	7	53
<b>Total</b>	Population	267	466	309	212	296	1550
	Sample	<u>40</u>	<u>71</u>	<u>46</u>	<u>33</u>	<u>46</u>	<u>236</u>

### Data Collection Methods and Tools

Tools are vital to carry out the research and it is the heart of the research to find out solution to properly formulated research problem.

### Data Analysis

In this study, the researcher has employed multiple regression models analysis. The raw data collected through questionnaire (close ended) were carefully cleaned, coded and entered into computer for processing by using the SPSS version 20.0. Quantitative data were analyzed through the use of statistical techniques such as percentages, arithmetic means and standard deviations.

### Model Specification

The growth of MSEs is subject to different set of interrelated factors (Baldwin, 1995). To investigate factors that determine the growth status of MSEs, Multiple Linear Regression Analysis was used to analyze factors that affect the growth of MSEs. This model has selected due to the nature of dependent variable. The study has used multiple linear regression analysis to establish relationship between the independent variables and the dependent variable in the following regression model formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon$$

➤  $Y = \beta_0 + \beta_1 \text{MESF} + \beta_2 \text{CF} + \beta_3 \text{MF} + \beta_4 \text{ARFF} + \beta_5 \text{PEF} + \beta_6 \text{WPF} + \beta_7 \text{SPF} + \beta_8 \text{IOF} + \epsilon$

- X1: MESF-management and expertise skill; X2: CF-consultancy; X3: MF-marketing factors; X4: ARFF- access to resource and finance; X5: PEF- political environment; X6: WPF -working premise; X7: SPF- selling premise; X8: IOF- indicators of opportunity

### **Description of Variables:**

Y = MSE Growth

MES= Management and Expertise skills

CF = Consultancy Factor

MF= Marketing Factor

ARF = Access to Resources and Finance

PE= Political Environment

WP = Working Premise

SP = Selling Premises

IO= Indicators of Opportunities

$\beta_0$  = Coefficient of the model

$\beta_1 - \beta_9$  = Beta Coefficient of Determination

$\epsilon$  = Stochastic Error Term

### **Model Assumptions**

The following diagnostic tests were carried out to ensure that the data fits the basic assumptions of linear regression models;

#### **Normality Test**

Normality test was carried out to verify if the error terms are normally distributed.

#### **Autocorrelation Test**

Autocorrelation or serial correlation refers to the case in which the error term in one time period is correlated with the error term in any other time period. The study employed the Durbin-Watson test.

### **Multicollinearity Test**

Detection was by matrix correlation among independent variables. According to Gujarati (2004), the rule of thumb is that if the pair-wise correlation coefficient between two repressors is high, in excess of 0.8, then multicollinearity is a serious problem.

### **Heteroscedasticity Test**

Heteroscedasticity occurs when the variance of the error term is not constant. The study employed popular White's heteroscedasticity Test. Gujarati (2004) asserts that the general test of heteroscedasticity proposed by White does not rely on the normality assumption and is easy to implement. The test based on the null hypothesis that the variance of the errors is constant (homoscedasticity).

### **Descriptive Analysis**

Descriptive analysis was used to reduce the data in to a summary format by tabulation (the data arranged in a table format) and measure of central tendency (mean and standard deviation). Moreover, pie charts were used to describe the general characteristics of enterprises. The reason for using descriptive statistics was to compare the different factors. Besides, the interview questions were analyzed using descriptive narrations through concurrent triangulation strategy.

### **Inferential Analysis**

According to Sekaran (2000), inferential statistics allows to infer from the data through analysis the relationship between two or more variables and how several independent variables might explain the variance in a dependent variable. From the inferential statistical methods the researcher were used Linear Regression Analysis for the study.

### **Ethical Consideration**

The Title of the study was approved by Ethical Review Committee of Hawassa University, CBE, department of Cooperative Development and Leadership. Relevant data for the study were collected by issuing an official letter to the concerned offices. The six (6) data collectors were informed about the purpose of the study and finally their consent has obtained before collecting

data. The respondent has the right to refuse or terminate at any point of the data collecting process. Concerning the right to anonymity and confidentiality, the participants were not required to write their names on the questionnaire and assured that their responses were not in any way linked to them. The dissemination of the finding was not referring to specific respondent. In any case, the confidentiality of information supplied and the anonymity of respondents were respected.

## **Result and Discussion**

### **Introduction**

This study sought to examine factors that affect the growth of SMEs in Hawassa City, Ethiopia. The study was guided by research questions to establish some major factors that affecting the growth of SMEs in Hawassa City. In this chapter, the data collected from respondents were analyzed and interpreted using quantitative analysis which involves analysis of the demographical information of respondents and the descriptive and inferential statistics employed and investigate the influence of independent variables on dependent variable.

### **Demographic Characteristics of Respondents**

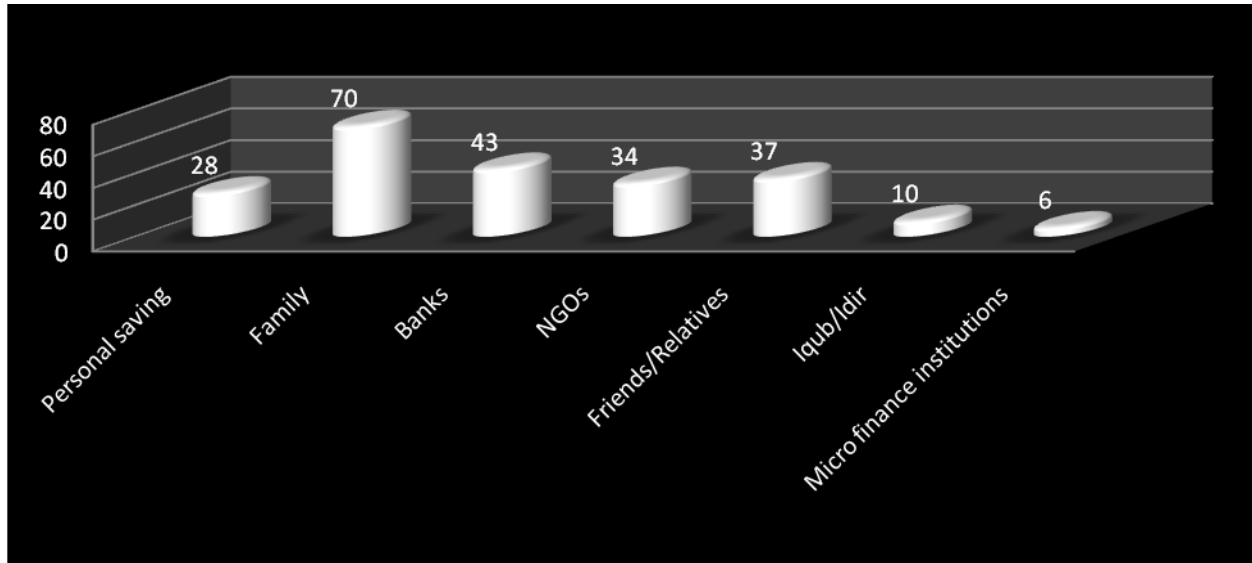
Table 4.3.7 below shows, MSEs primary sources of start-up funds to start their business, accordingly 12.3% of the respondents answered, personal saving was our primary sources of funding; family were the primary sources of funding during starting their business to 30.7% the respondents; 18.9% respondents obtained startups funding from banks; 14.9% obtained startup funding from NGOs; 16.2% responded friends/ relatives were the sources of their startup funds; 4.4% responded Iqub/Idir were the sources of their startup funding; 2.6% responded micro finances are the sources of startup funding.

This implies that, MSEs were attached to get funding to other sources of funding than financial intuitions; hence, financial institutions are not in a good track on establishing, maintaining and enhancing long- lasting relationships with MSEs in order to improve growth of MSEs.

**Table 1: How did you raise funds to start-up your business?**

<b>Sources of start-up business</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Personal saving	28	12.3	12.3
Family	70	30.7	43.0
Banks	43	18.9	61.8
NGOs	34	14.9	76.8
Friends/Relatives	37	16.2	93.0
Iqub/Idir	10	4.4	97.4
Micro finance institutions	6	2.6	100.0
<b>Total</b>	<b>228</b>	<b>100.0</b>	

*Source: Field survey (2019)*



**Figure: 1 Sources of Startup fund**

### Descriptive Statistics of Scaled Type Questionnaires

#### Management and Expertise skills

**Table 2 Descriptive statistics of Management and Expertise skills**

No.	Management and Expertise skills	1	2	3	4	5	Mean	Std.D
1.1	Lack of clear division of duties and responsibility among employees	31 (13.6)	26 (11.4)	33 (14.5)	81 (35.5)	57 (25.0)	3.47	1.342
1.2	Poor organization and ineffective communication	19 (8.3)	39 (17.1)	32 (14.0)	92 (40.4)	46 (20.2)	3.47	1.225
1.3	Lack of well trained and experienced employees	38 (16.7)	36 (15.8)	31 (13.6)	80 (35.1)	43 (18.9)	3.24	1.372
1.4	Lack of strategic business planning	24 (10.5)	54 (23.7)	23 (10.1)	83 (36.4)	44 (19.3)	3.30	1.308

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Lack of clear division of duties and responsibility among employee's poor organization and ineffective communication has scored similar means with some disparities with standard deviation and has shown that, the most influential factors in affecting management and expertise skills of MSEs. From this data it can be inferred that, management and expertise skills has a negative consequences on the growth of SMEs in Hawassa.

### Consultancy Factors

**Table 3 Descriptive statistics of Consultancy Factors**

No.	Consultancy Factors	1	2	3	4	5	Mean	Std.D
2.1	Lack of regular follow-up	4 (1.8)	10 (4.4)	53 (23.2)	105 (46.1)	56 (24.6)	3.87	.894
2.2	Lack of independent consultant	5 (2.2)	10 (4.4)	6 (2.6)	93 (40.8)	114 (50.0)	4.32	.894
2.3	Lack of persistence and courage to take responsibility for one's failure	8 (3.5)	7 (3.1)	3 (1.3)	85 (37.3)	125 (54.8)	4.37	.932
2.4	Absence of initiative to assess ones strengths and weakness	31 (13.6)	26 (11.4)	18 (7.9)	96 (42.1)	57 (25.0)	3.54	1.342

2.5	Lack of entrepreneurship training	29 (12.7)	32 (14.0)	38 (16.7)	70 (30.7)	59 (25.9)	3.43	1.347
2.6	Lack of information to exploit business opportunities	27 (11.8)	16 (7.0)	18 (7.9)	92 (40.4)	75 (32.9)	3.75	1.304
2.7	Lack of information to prerequisite financial access	24 (10.5)	25 (11.0)	40 (17.5)	77 (33.8)	62 (27.2)	3.56	1.284

From this data it can infer that lack of persistence and courage to take responsibility for one's failure and lack of independent consultant having mean value of 4.37 and 4.32 with little disparities with standard deviation, showing higher level of factors in affecting the growth of MSEs in hawassa city, lack of regular follow up is next top up factor in affecting the growth of MSEs, and the mean values shows for all sub units, as there is consultancy problem with MSEs, for this reason establishment does not worth much to MSEs.

## Marketing Factors

**Table 4 Descriptive statistics of Marketing Factors**

No.	Marketing Factors	1	2	3	4	5	Mean	Std.D
3.1	Inadequate market for my product	32 (14.0)	30 (13.2)	44 (19.3)	69 (30.3)	53 (23.2)	3.36	1.344
3.2	Searching new market is difficult	26 (11.4)	39 (17.1)	33 (14.5)	70 (30.7)	60 (26.3)	3.43	1.344
3.3	Connecting to existing market is difficult	30 (13.2)	35 (15.4)	41 (18.0)	68 (29.8)	54 (23.7)	3.36	1.344
3.4	Lack of demand forecasting	18 (7.9)	50 (21.9)	48 (21.1)	61 (26.8)	51 (22.2)	3.34	1.261

3.5	Lack of promotion to attract potential users	31 (13.6)	34 (14.9)	49 (21.5)	77 (33.8)	37 (16.2)	3.24	1.276
3.6	Lack of market information	14 (6.1)	42 (18.4)	40 (17.5)	83 (36.4)	49 (21.5)	3.49	1.193
3.7	Absence of relationship with an organization that conduct marketing research	26 (11.4)	31 (13.6)	50 (21.9)	64 (28.1)	57 (25.0)	3.42	1.306

In general, from this data it can be generalized all the variables are affecting growth of MSEs in Hawassa city with more than 3 average mean. As it has indicated empirical literature reviews, According to Gebreyohannes (2015) Market is the major constraint that highly hinders the firms' performance for all sectors in the manufacturing MSEs. About 43% of the enterprises' sales performance is below their expectation level and in few cases there is no sale at all, this study also has identified that out that Inadequate market for my product, Searching new market is difficult, therefore, there the market problems hinder MSEs growth.

### Access to Resource and Finance

**Table 5 Access to Resource and Finance**

No.	Access to Resource and Finance	1	2	3	4	5	Mean	Std.D
4.1	Inadequacy of credit institutions	21 (9.2)	36 (15.8)	30 (13.2)	67 (29.4)	74 (32.5)	3.60	1.329
4.2	Lack of cash management skills	21 (9.2)	36 (15.8)	30 (13.2)	78 (34.2)	63 (27.6)	3.55	1.294
4.3	Shortage of working capital	24 (10.5)	29 (12.7)	33 (14.5)	81 (35.5)	61 (26.8)	3.55	1.294
4.4	High collateral requirement from banks and other lending	19	40	27	70	72	3.60	1.316

	institutions	(8.3)	(17.5)	(11.8)	(30.7)	(31.6)		
4.5	High interest rate charged by banks and other lending institutions	21 (9.2)	40 (17.5)	36 (15.8)	75 (32.9)	56 (24.6)	3.46	1.285
4.6	Loan application procedures of banks and other lending institutions are too complicated	28 (12.3)	24 (10.5)	33 (14.5)	87 (38.2)	56 (24.6)	3.52	1.302

From the above data, it can be inferred that, high collateral requirement from banks and other lending institutions is highly affecting financial access and resources of MSEs in hawassa city, the mean score values 3.60 has shown one of the highly affecting factor for their growth, similarly Inadequacy of credit institutions equally affecting financial access and resources of MSEs having similar mean with 3.60 collateral factor, though showing little disparities among respondents in their responses.

## Political Environment

**Table 6 Political Environment**

No.	Political Environment	1	2	3	4	5	Mean	Std.D
5.1	Bureaucracy in company registration and licensing	19 (8.3)	22 (9.6)	32 (14.0)	90 (39.5)	65 (28.5)	3.70	1.216
5.2	Lack of government support	11 (4.8)	35 (15.4)	27 (11.8)	75 (32.9)	80 (35.1)	3.78	1.215
5.3	Lack of accessible information on government policy and regulations that are relevant to my business	20 (8.8)	25 (11.0)	18 (7.9)	96 (42.1)	69 (30.3)	3.74	1.245

5.4	Opinion of school of thought	32 (14.0)	11 (4.8)	29 (12.7)	101 (44.3)	55 (24.1)	3.60	1.292
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From the above table it can infer that; majority of MSEs growth affected by political environment is with lack of government support and lack of accessible information on government policy and regulations that are relevant to my business showing mean value of 3.74 Therefore, it may be concluded that bureaucracy in company registration is the main factor that affects the growth of all sectors.

### Working Premise Factors

**Table 7 Working Premise Factors**

No.	Working Premise Factors	1	2	3	4	5	Mean	Std.D
6.1	Absence of own premises	24 (10.5)	22 (9.6)	29 (12.7)	83 (36.4)	70 (30.7)	3.67	1.291
6.2	Current working place is not convenient	31 (13.6)	23 (10.1)	20 (8.8)	83 (36.4)	71 (31.1)	3.61	1.373

6.3	The rent of house is too high	23 (10.1)	31 (13.6)	23 (10.1)	77 (33.8)	74 (32.5)	3.65	1.327
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From the respondents, it can be infer that, absence of own premise the biggest challenges to the SMEs constituting mean value of 3.67 and followed by the high rent expense constituting 3.65 mean and 1.327 standard deviation.

### Selling Premise Factors

**Table 8 Selling Premise Factors**

No.	Selling Premise Factors	1	2	3	4	5	Mean	Std.D
7.1	Have no selling premises	18 (7.9)	26 (11.4)	23 (10.1)	95 (41.7)	66 (28.9)	3.67	1.291
7.2	selling premises is not in convenient place	23 (10.1)	12 (5.3)	25 (11.0)	80 (35.1)	88 (38.6)	3.61	1.373
7.3	Lack service after sale	23 (10.1)	17 (7.5)	19 (8.3)	83 (36.4)	86 (37.7)	3.65	1.327

From the respondents feedback, it can be concluded as, most of the SMEs have no selling premises; though they are striving to survive, unless they have selling premises to show and sell their product, their existence is in question. One of the top factors affecting MSEs growth is lack of working premises which has scored them value of 3.67 followed by lack of service after sale with 3.65 mean value.

### Indicators of Opportunities

**Table 9 Indicators of Opportunities**

No.	Indicators of Opportunities	1	2	3	4	5	Mean	Std.D
8.1	MSEs have access to get to	89	87	19	22	11	2.03	1.140

	business	(39.0)	(38.2)	(8.3)	(9.6)	(4.8)		
8.2	MSEs after establishment immediately operate their business	109 (47.8)	74 (32.5)	18 (7.9)	19 (8.3)	8 (3.5)	1.87	1.093
8.3	There is capacity building to start business	113 (49.6)	79 (34.6)	14 (6.1)	16 (7.0)	6 (2.6)	1.79	1.016
8.4	Have access to consultancy	100 (43.9)	73 (32.0)	29 (12.7)	18 (7.9)	8 (3.5)	1.95	1.096
8.5	Access to tangible support service	91 (39.9)	75 (32.9)	33 (14.5)	20 (8.8)	9 (3.9)	2.04	1.120
8.6	Access to frequent supervision	68 (29.8)	72 (31.6)	44 (19.3)	28 (12.3)	16 (7.0)	2.35	1.224
8.7	Access to standardization	55 (24.1)	94 (41.2)	48 (21.1)	16 (7.0)	15 (6.6)	2.31	1.112

From this data it can be concluded as the whole mean score shows, as there is low indicators of opportunity available to MSEs, in turn this might not encourage new MSEs to enter to the business. Enabling small and medium-sized enterprises to achieve greater benefit from standards and from involvement in standardization is good. (Jappe van der Zwan, 2009)

Interview with some MSEs owners, answered, there is less consideration has given interns of capacity building, access to regular follow-up, beside lack of service provision with consultancies in technical and theoretical issues which either build our capacities with managerial aspects or improve technical parts. And some of them answered that, this type of service are not rendered as requested, if someone come from the sub cities, it is not for constructive support, but rather he is coming to discourage and request us to do some other obligation,...

### **Comparison of Factors**

**Table 10 Ranking of the major factors that affect the Growth of MSEs**

	Mean	Std. Deviation	Rank of severity	N
Growth	4736.2675	3007.89758		228
Management and Expertise skills Factor )	3.3695	1.04535	8 <sup>th</sup>	228
Consultancy Factors	3.8346	.73202	1 <sup>st</sup>	228
Marketing Factors	3.3759	.86013	7 <sup>th</sup>	228
Access to Resource and Finance	3.5475	.93541	6 <sup>th</sup>	228
Political Environment	3.7050	1.00325	4 <sup>th</sup>	228
Working Premise Factors	3.6447	1.14063	5 <sup>th</sup>	228
Selling Premise Factors	3.8114	1.04664	3 <sup>rd</sup>	228
Indicators of Opportunities	2.0482	.72960	2 <sup>nd</sup>	228

*Source: Field survey (2019)*

## B. Inferential Analysis

### Multiple Regression Analysis

**Table 11 Result of Coefficients of Determination**

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.855 <sup>a</sup>	.732	.722	1585.84824	1.790

a. Predictors: (Constant), IOFX8, WPFX6, MESFX1, PEFX5, CFX2, SPFX7, ARFFX4, MFX3

- a. Dependent Variable: Capital Differences
- b. IOFX8- indicators of opportunity; WPFX6 -working premise; MESFX1- management and expertise skills; PEFX5- political environment; CFX2- consultancy; SPFX7- selling premise; ARFFX4- access to resource and finance; MFX3-marketing factors.

**Source: Field survey (2019)**

The “R” value is used to indicate the strength and direction of the relationship between the variables. The closer the value gets to 1, the stronger the relationship. In this case as shown above, R= 0. 855. This means there was an overall strong and positive relationship between the variables. The R-Square in the study was found to be 0.732. This value indicates that the independent variables (management, consultancy, marketing, access to resources and finance, political environment, working premise, selling premise and indicators of opportunities can explain 73.2% of the variance in the growth of MSEs in Hawassa City Administration. The remaining 26.8 % of the variance is explained by other variables not included in this study.

**Table 12 Result of Multiple Regression analysis Coefficients**

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	94.0% Confidence Interval for B		Co linearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	3504.407	977.303		3.586	.000	1578.284	5430.529		

MESFX1	72.547	101.359	.025	.716	.475	-127.217	272.312	.987	1.013
CFX2	597.801	154.943	.145	3.858	.000	292.431	903.171	.861	1.161
MFX3	-303.520	133.489	-.087	-2.274	.024	-566.607	-40.433	.840	1.190
ARFFX4	393.261	121.233	.122	3.244	.001	154.328	632.193	.861	1.161
PEFX5	- 2058.76 8	107.979	-.687	- 19.066	.000	- 2271.579	- 1845.958	.944	1.059
WPFX6	350.826	97.241	.133	3.608	.000	159.178	542.475	.901	1.110
SPFX7	1399.39 8	105.736	.487	13.235	.000	1191.006	1607.789	.905	1.105
IOFX8	-322.154	152.772	-.078	-2.109	.036	-623.245	-21.064	.892	1.121

a. Dependent Variable: Growth

b. Predictors: (Constant), consultancy , Resource and Finance Factors, Management and Expertise Skill, Working Place Factors, Marketing Factors, Political environment factor, indicator of opportunity

**Source: Field survey (2019)**

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.

$$Y = \beta_0 + \beta_1 MaEs + \beta_2 AcFnR + \beta_3 CoSe + \beta_4 Makg + \beta_5 WgPm + \beta_6 PoEt + \beta_7 SgPm + \beta_8 IO + e$$

$$\text{Growth} = 3504.407 + 72.547 MaEs + 393.261 AcFnR + 597.801 CoSe - 303.520 Makg + 350.826 WgPm + 2058.768 PoEt + 1399.398 SgPm - 322.154 IO$$

## Conclusions and recommendations

### Conclusions

This study used both quantitative and qualitative approaches and a research mainly used explanatory types of research design. Based on the objectives and findings of the study, the following conclusions have drawn.

From the descriptive statistics of sources of startups funds to MSEs, the result has shown, Informal financial sources like personal savings, iqub/idir, family and friends/relatives pockets are main sources for startup and expansion of MSE in Hawssa City. The formal financial institutions have not been able to meet the credit needs of the MSEs. Since there is high interest rate and collateral requirement, most MSEs have been forced to use the informal institutions for credit. But the supply of credit from the informal institutions is often limited to meet the credit needs of the MSEs.

The descriptive statistics of scaled type questionnaire; the findings of this study indicated in table No. 4.5.1 shows all the respondents agreed that there is Management and Expertise skills in their business, the average mean score 3.37 conforms the problem persists.

In addition the findings in table 4.4.2 revealed that, there is huge gap in consultancy services to MSEs in Hawassa City, absence of initiative to asses ones strengths and weakness and lack of independent consultants are among the major factors which deter their growth, having the largest mean of 4.37 and 4.32 respectively. The findings shows, there is huge gap in provision of consultancy services, lack of regular follow-up, lack of training, lack of information to exploit business opportunities were the core findings in the study.

Further this study indicates that, marketing factor includes inadequacy of market, difficulty of searching new market, lack of demand forecasting, lack of market information and absence of relationships with an organization/association that conduct marketing research are the major obstacles of growth of MSEs.

The finding shows that majority of MSEs operators in the study area do not have suitable working places. Because of this, the MSEs operators do not perform their business related activities effectively and efficiently.

Lack of Access to resources and Finances has identified as one of the factor deter MSEs not go forth, financial availability is the back bone to mobilize resources,

Political environment has identified as one of the factor deter growth of MSEs, table 4.5.5 reveals, opinion of school of thought has high influences on MSEs growth, and Lack of

sufficient support from government in the preparation of well located place for MSE operators, market related and source of fund issues, etc are serious problems for MSEs growth.

The finding of the study, with regards to working premises conforms as MSEs complain about working premises, and they are not satisfied with the available schemes, table 4.4.6 shows absence of own premises, inconvenience of the existing premises are the major factors identified

The study has also revealed that there is high grievances with selling premise factor, according to table 4.5.7 elaboration, lack of own selling premises, lack of service after sale and inconvenience of selling place has the identified factor which limit their growth having 3.64 average mean.

Finally, the research has clearly illustrates that, available opportunities to MSEs table 4.5.8 has shown the smallest mean 1.87 , that the respondents strongly disagreed that as they operate their business immediately also strongly disagreed on MSEs have access to get to business are among identified factors to deter their growth

In general, from the descriptive statistics analysis of table 4.6.1 it has inferred that, ranking according to severity factor which affect the growth of MSEs in Hawassa City's were possible; accordingly consultancy factor was the first rank of the factors that affect MSEs growth followed by indicators of opportunity, then selling premises, then political environment factor, next working premise factor followed by access to finance and resources and marketing factors had identified factors highly affect the growth of MSEs.

From the finding, it has observed that management and expertise skills does not affect the growth of MSEs in Hawassa city, table 4.6.1 reveals that Management and expertise skills is insignificant to affect the growth of MSEs in Hawassa City and is not considered as a factor to deter their growth.

### **Recommendations**

This study has demonstrated that factors affecting the growth of micro and small enterprises in Hawassa city administration. In light of the findings and conclusions made above, the following possible recommendations are suggested as being valuable to government, SMEs offices, and concerned stakeholders to take action in tackling factors affecting their growth and to improve the contributions of MSEs to the economy in general and to the study area in particular.

### **To Financial Institutions:**

The major sources of finance or funds for most of MSEs operators at the study area are informal sources. The reason for emphasizing on informal sector is that the requirement of collateral/guaranty is relatively rare or none when compared to the formal sectors like MFIs and banks.

- The policy concerning access to finance should be improved to reflect the realities; access to finance should be sufficient and should allow MSE to easily start up a new venture, undertake productive investments and to expand their businesses. Thus, the government can give due attention for these precise challenges identified on this research work and workout a different policy that MSEs can have easy access for loan with reduced interest rate, relaxed collateral requirement, allocate or arrange a different guarantee mechanism so that they can easily access finance with prolonged repayment period

### **To Ethiopian and SNNPR regional government bodies:**

- As the study investigate, because of consultancy problem, majority of MSEs are liquidated and their growth has deterred
- Consultancy factor which has investigated as one of the Sevier factor affecting the growth of MSEs in Hwassa city should be given due emphasis by the government, policy makers and legislators. As MSEs are hope of the country in absorbing huge an employment, introduces products and services and are the center of innovation; as a primary sector of the economy together with the large enterprises have to get special consideration. Therefore, for the study has revealed this problem highly, the government and concerned stakeholders should hire independent consultants at national, regional, sub cities and kebele level; in this way MSEs will achieve the long term government goals: one to achieve in absorbing huge unemployment and contribute to the national income (GDP) in the long run.
- This research work revealed that working premises is a challenge for MSEs; they spend more time on getting premises. However, government has to do more and apply a more effective approach by building premises that are rationally address their needs to MSEs and build more

as demand arises. The sites to be chosen should be appropriate to the needs of MSEs that realize their infrastructure requirement, access for market, input etc.

- With regard in getting license and hectic process, the government through various relevant departments should specialize more in taking up a facilitative role. To solve problems of enterprises it is better to make registration online. Conducive environment should be established to protect MSEs from unfair competitions.

### **To Sub Cities and Kebele's**

- Sub cities and Kebele's are the first line to meet MSEs, these offices should take care of MSEs during establishment and on job, and they should be equipped with standard customer handling, documentation, articles, and manifest opportunities available in their kebeles or sub cities, so that MSEs to establish have adequate knowledge about areas they will like to choose.
- To make MSEs competitive and profitable, increase the capacity, knowledge and skill of the operators, experience sharing from successful enterprises, and provision of advice and consultancy, continuous capacity building initiatives and accessibility of relevant technologies should be availed by them.

### **To Researchers/ Academicians**

- Academicians and researchers should involve in aggravating the growth of MSEs at national and regional level, they should involve or interfere in the MSEs systems let them function effectively. As long as the country demanded economic contribution of MSEs, unless academicians and researchers are involved, this cannot be achieved; therefore, all academicians should involve in research to figure out opportunities and challenges of MSEs in the spirit of Nationalism.
- Professionalism plays vital role in concretizing theories and practices, therefore, professional academicians and researchers should lead the MSEs office at national and regional level, if sustainable thinking and long lasting MSEs are considered, political assignation of individuals should be stopped and replaced by professionals.
- Who do our countries wait to uplift MSEs, foreign professionals?

## **Implications for Future research**

Although the objectives of this research were met, two limitations were identified in the course of this research. First, the study focuses on only the MSEs. Such concentration could limit generalization of the findings to the entire MMSEs.

Anyway, this limitation creates an opportunity for future research in this area. This future research may replicate this study in other sectors like medium enterprises and additional research is necessary to determine if the relationships identified can be generalized to medium enterprises.

Future studies may also investigate the possible moderation and mediation effects variables in examining these effects, these future studies would add value to the present knowledge in this area, by establishing an indirect association between underpinnings and SMEs growth via marketing factor, consultancy, selling premises, opportunities and whether the relationship between MSEs keystones and the explanatory variables are moderated by MSEs growth.

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## **Closing Speech**



**MR. Sintayehu Zeleke, Vice President for Academic Affairs and Research**

Your Excellency Mr. Dereje Tekalign, President of Infolink College

Your Excellency, Professor Ongaye Oda, our Key note Speaker

Our Dear Guests

Ladies and gentlemen!!

I am honored to have this opportunity to make a concluding remark on the first national conference organized under the theme quality research for sustainable development. In this research conference five research papers were presented. These are:

- Factors Influencing the purchasing performance in Wolaita Sodo University
- Effective utilization of copper Slag for the production of green and sustainable concrete
- Factors Affecting the growth of micro and small enterprise in Hawassa city, SNNPR, Ethiopia
- Assessment of Factors influencing the financial performance of small micro business Enterprise. The case of Wolaita Sodo Town
- The relationship between financial performance and CAMEL rating of commercial bank

Though few researcher papers were presented, we could able to get many lessons and the findings of these research works seem applicable to solve problems on the ground. Even though most of our permanent and par time staffs masters and degrees above, the practice of research is at an infant stage in our college.

Thus, what we did today in the name of research conference serves as motivational element for staffs in our college to take part in research in addition to their teaching role. As the president of the college, Mr. Dereje Tekalign indicated it very well; we designed strategies to promote quality research activities in addition to promoting quality education. We do not only struggle to stay in the market, but we want to stay in a very beautiful way. We want to make our college excel in teaching and research. But, this cannot happen with the support of our friends. So, taking this opportunity, I would like say that Infolink College is yours and we are friends. So, cooperate with us to realize our vision and mission. Finally, I would like to extend my appreciation and heartfelt thanks to the following bodies for the success of the conferences:

- Mr. Dereje Tekalign, President of infolink College
- Office of Research and Community Services
- Office of vice president for Academic Affairs
- Office of Corporate Affairs
- Research Presenters and facilitators
- Deans and vice Deans
- Research participants

Thank you very Much! I want to officially announce that the conference is closed.



