

Analysis of Growth Determinants of Micro and Small Scale Enterprises in Urban Areas of West Shoa, Oromia Regional State, Ethiopia

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Abstract

In the recent past the growth of Micro and Small Scale Enterprises (MSSEs) has been of great concern. This is mainly due to the need to realization of their contribution to Gross Domestic Product (GDP) and economic growth. Empirical literature on MSSEs growth is scant in Ethiopia and gap is even more evident when it comes to study area as there was no other study before. This study investigates some key determinants of employment expansion among micro and small scale enterprises based on a survey covering 176 randomly selected enterprises. The data was collected by key informant interviews, FGDs and semi structured questionnaires. The model used in this study was binary logistic model. Most enterprises are male owned, fail to diversify their product and limited access to training. The majority of enterprises in the study area are surviving rather than growing. Among the demographic variables sex of the owner significantly affects firms growth whereas owners age and owners marital status effect is insignificant. Similarly among the economic variables firms access to formal credit and firms initial capital or investment, positively and significantly affect their growth while firms' separation of household expenditures from their business failed to have any significant effect on firms' growth. Moreover among the human capital variables all of the hypnotized variables namely owners' educational levels, owners previous experiences and owners on work training access affects firms growth positively and significantly. Among firms related variables except type of the business and firms' product diversity that have insignificant effect on firms' growth and firms age and initial size affect firms' growth negatively and significantly. Firms related variables such as the firms sector type, firms customer handling, firms record keeping ,firms market research before starting operation, firms location have a significant and positive effect on their growth. In the absence of formal source of credit, informal networks such as, credit from relatives and friends, subscription by partners enhance business expansion. Location, capital shortage, overtaxes, and lacks of market center are the key challenges of MSSEs in the study area. Policies and support programs need to take measures by focusing on the significantly determinants of MSSEs growth via taking the heterogeneity nature of enterprises and entrepreneurs.

Keywords: Employment, Growth, Micro, Small, Scale, Enterprises

Introduction

About 80 percent of the Ethiopian population engaged in smallholders' subsistence agriculture which accounts for 46 percent of GDP. (CSA 2013) The government owns all of the land, and the average plot of land worked per family is nearly one hectare. The increasing population is putting further pressure on the land. In addition, only one percent of arable land is irrigated; thus, droughts have a devastating effect. The face of the alarming rate of population growth coupled with increasing failure of the traditional agriculture to absorb additional labor force resulted in amplified rural urban migration. There is high unemployment in urban areas, with estimated 48 percent for men between 15 and 30 years of age. The urban unemployment generally has led to the growth of the informal economy (Financial Standards Forum, 2009).

In the recent past the growth of Micro and Small Scale Enterprises (MSSEs) has been of great concern mainly due to its contribution to economic growth and employment creation. To this effect, the government of Ethiopia has formulated a National MSSEs Development policy to promote the growth of Micro and Small Scale Enterprises. It is viewed as a means towards industrial and economic growth and as well as tools of poverty reduction. It takes the lion share of private business operations in terms of numbers, specialization, product diversifications and job creation. As a result, MSSEs play a vital role in employment generation as well as source of fast economic growth and transition to industrialization.

Understanding the general characteristics of Micro and Small Scale Enterprises and the growth determinants of Micro and Small Scale Enterprises is critical to design proper policy. In addition empirical evidences on determinants of enterprise growth would help to undertake effective decisions regarding the Micro and small scale enterprises. However, up to now there are few field studies conducted on the growth of Micro and small scale enterprises and its contribution to the employment. Accordingly this study undertaken growth analysis of the Micro and small scale enterprises in Urban Agriculture, Service, Manufacturing, Trade, and Construction sectors with special emphasis on employment growth.

There is no commonly agreed definition for Micro and Small Scale Enterprises . Instead the definitions

and measurements of Micro and small scale enterprises depending on the level of each country's economic development. Its meanings are also attached to the different characteristics of Micro and small scale enterprises ranging from Micro to Small activities such as entrepreneurship, ownership, and management, labor status and the size of the entity. Based on this, the standard criteria for categorizing firms by size include: the number of employees, total net assets, volume of sales and level of capital investment (Ayyagari et al. 2003).

In Ethiopia, the definition of Micro and small scale enterprises is obtained by considering the paid-up capital and the number of employees engaged in the sector. Accordingly, Micro Enterprises are those business enterprises with a paid-up capital of less than 20,000 birr and excluding high tech consultancy firms and other technology establishments; whereas Small Enterprises are those businesses with a paid up capital above 20,000 birr and not exceeding 500,000 birr, and excluding high tech consultancy firms and other technology establishments (MoTI, 1997). Another working definition of Micro and small scale enterprises in Ethiopia is the definition given by Central Statistics Authority and Ministry of Labor and Social Affairs in 1997 that was focused on the number of workers employed in the sector. Accordingly, a Micro Enterprise is one with fewer than 10 employees and Small Enterprise is one with 11-50 employee. For this study, the definition given by given by Central Statistics Authority and Ministry of Labor and Social Affairs in 1997 was used (CSA, 2003).

The Specific Objectives

- To examine the general characteristics of Micro and Small Scale Enterprises in the study area.
- To analyze growth determinants of Micro and Small Scale Enterprises in the study area.

Research Methodology

Description of the study area

Ambo town is located in western part of the Oromia Regional state and it is the Zonal town of West Shoa Zone. It is located at a distance of 112 km from Addis Ababa on the main road that leads to western region of Ethiopia. Over the past few years the population of Ambo town has been growing rapidly. The growth trend of the last ten years indicates that the town has been growing at an average rate of 5 percent. This rate of growth roughly matches the national average of 4.1 percent, putting the town among other fast growing cities in the country. The town provides township plan prepared by the national urban planning institution. The master plan covers different aspects such as development plans road network plans, utility service plans, drainage and land use plan etc.

Research Design

The types of research employed under this study were descriptive and explanatory research. The descriptive research design was used in order to describe the state of affairs as it exists in the study. Second, the study also explore the relationship between variables with an aim of estimating the influence of the key determinants on the growth of Micro and small scale enterprises. The study also used a combination of qualitative and quantitative research approaches. It employed both primary and secondary methods of data collection. Semi-structured questionnaires, Key Informant Interviews (KIIs), Focus Group Discussions (FGDs) were the methods used as primary data collection tools. The respondents were different individuals owning Micro and small scale enterprises, government experts who are involved in supporting enterprises and Micro Finance institutions. FGDs (focus Group Discussions) were also undertaken by using the formulated checklist for this purpose.

Sampling Techniques and Procedures

The study used Multistage Sampling in that Ambo town was purposely selected among the West Shoa Zone towns as it is the Capital of West Shoa zone with higher rate of unemployment. At the second stage; the study used stratified random sampling. This technique was preferred because it is used to assist in minimizing bias when dealing with the population. With this technique, the sampling frame was organized into relatively homogeneous groups (strata) before selecting elements for the sample due to the fact that the final sample can be representative in terms of the stratified groups. Hence the strata's were enterprises including: Urban Agriculture, Service, Manufacturing, Trade and Construction. In order to select representative sample, a list of the population Micro and small scale enterprises documented by the Ambo town Micro and small scale enterprises development office was obtained. Hence the total population of the study was 301 enterprises in which were Urban Agriculture (10), Service (68), Manufacturing (43), Trade (88), Construction (92). The probability sampling method (Watson, 2001) was used to determine the sample size of the study.

$$n = \frac{P(1-P)}{Z^2 \frac{A^2 + P(1-P)}{N}}$$

Where, n = sample size required = 176

N = number of population = 301

P = estimated variance in the population = 50%

A = margin of error = 5%

Z = confidence level = 1.96 for 95% confidence

R = estimated response rate = 96 %.

Accordingly, 176 respondents were selected from the total of 301 Micro and small scale enterprises . These 176 respondents were selected from the Urban Agriculture (10), Manufacturing (43), Construction (92), Service, (68), Trade (88) enterprises using PPS method to ensure representativeness of the sample. Therefore, $[(10/301) \times 176] = 6$ Urban Agriculture enterprises out of 10, $[(43/301) \times 176] = 25$ Manufacturing enterprises out of 43, $[(92/301) \times 176] = 54$ Construction enterprises out of 92, $[(68/301) \times 176] = 40$ Service enterprises out of 68, $[(88/301) \times 176] = 51$ Trade enterprises out of 88 was selected. Finally simple Random Sampling method was used to select the sample respondents.

Data Analysis

In the data processing procedure editing, coding, classification and tabulation of the collected data were done before proceeding to analysis. The Statistical Package for Social Science (SPSS) version 20 was used to analyze the data obtained from primary sources. Specifically, descriptive statistics (mean, standard deviation and percentages) inferential statistics such as χ^2 , T test and econometric methods were used to analyze quantitative data in the study. The qualitative data was analyzed through narration and discussions.

Enterprise Growth Measures

There is a little agreement in the existing literature on how to measure enterprise growth thus most previous studies have used a variety of different measures such as total assets, sales, employment and size, profit, capital, and others (Berkham et al., 1996; Davidsson & Wiklund, 2000; Holmes & Zimmer, 1994). Moreover, growth has been measured in absolute or relative terms. Perhaps the most common means of firm growth is through relatively objective and measurable characteristics such as growth in sales turnover, total assets and employment size. These measures are relatively uncontroversial, the data tend to be easily available and it increases the scope for cross study comparability (Freel & Robson, 2004). But it is difficult to get reliable time series data on growth of fixed assets/sales (better indicator of growth). Hence, the measurement of growth in terms of changes in the numbers of workers based on recall of the respondents was used in this study. Interestingly, Evans (1987) reports that estimate using employment size is similar to those that use sales besides growth in sales and growth in the number of workers are highly correlated. Therefore, this study measures the growth of Micro and small scale enterprises using employment size. The growth rate of the Micro and small scale enterprises is computed following Evans

(1987) model i.e.
$$gr = \frac{(\ln \text{Current size}(st') - \ln \text{initial size}(sto))}{\text{age of the firm}(\text{age})}$$
 where $\ln St'$ is natural logarithm of current employment size, where $\ln Sto$ is natural logarithm of initial employment size, age is age of the enterprise and gr is growth rate of an enterprise.

Calculating the growth between the end points i.e. between current and initial size has its own limitation as this might mask the fluctuations in the middle time span. The transitory fluctuations in size or transitory measurement errors in observed size could bias the growth regression (Davis, Haltiwanger, and Schuh, 1996). Due to the cross-section nature of the data, the major discussion was relied on the growth calculation of initial to current change in size. The other statistical problem in such model is the effect of sample censoring due to exit. Small firms that have slow or negative growth are more likely to exit than are the larger firms. Thus the proportional rate of growth conditional on survival will be small for larger firms. Ignoring this problem might result in downward bias estimate in the relationship between growth and size of firms. However, this bias turns out to be insignificant in many previous studies (McPherson 1996, Evans 1987, Hall 1987).

The Model specification

Prior to the estimation of the model parameters, it is crucial to look into the problem of multi co linearity among the potential selected variables. There are two measures that are often suggested to test the existence of multicollinearity. These are Variance Inflation Factor (VIF) for association among the continuous explanatory variables and contingency coefficients for dummy/discrete variables.

According to Maddala (1992), VIF can be defined as: $VIF (X_i) = \frac{1}{1 - R_i^2}$, Where R_i^2 is the squared multiple correlation coefficient between X_i and the other explanatory variables. A statistical package known as SPSS version 20 was employed to compute these values. Once VIF values were obtained the R^2 values can be computed using the formula. Similarly, there may be also interaction between qualitative variables, which can lead to the problem of multicollinearity. To detect this problem, coefficients of contingency were computed. The contingency coefficient was computed as follows:

$$C = \sqrt{\frac{\chi^2}{n + \chi^2}}$$

where, C is coefficient of contingency, χ^2 is chi-square test and n = total sample size. As a rule of thumb, variable with contingency coefficient below 0.75 shows weak association and value above it indicates strong association of variables. To this end, the variance inflation factor (VIF) and contingency coefficient test was computed separately. The values of VIF for continuous variables were found to be less than 10. To avoid serious problem of multicollinearity, it is quite essential to omit the variables with VIF value greater than or equal to 10 from Logit analysis. Based on VIF result, the data have no serious problem of multicollinearity. Similarly, the contingency coefficient, which measure the association between various dummy/ categorical variables based on correlation was computed in order to check the degree of association among the dummy/ categorical explanatory variables or the existence of multicollinearity problem. The decision rule for contingency coefficients states that when its value approaches 1, there is a problem of association between the dummy/ categorical variables. Also the contingency coefficient result indicates that the data have no serious problem of multicollinearity. The value of Pearson Chi-square test shows that overall goodness of-fit of the model at less than 1% probability level. The model predicts 70.2% (Pseudo R2=0.7024) variation in dependent variable.

The logit model based on cumulative logistic probability function is used in this study since it is believed to offer better explanation on underlying relationship between firm growth and the factors affecting on it. The dependent variable in this case is dummy variable since Micro and small scale enterprises are assumed to be either growing or survival. Hence the binary logistic regression model which helps to test the determinants of firm growth can mathematically be specified as follows:

$$P_i = E(Y = 1 | X_i) = \beta_0 + \beta_i X_i \dots\dots\dots (3)$$

Where Y=1 means growth of a firm

X_i is a vector of independent variables

β_0 is the constant and $\beta_i, i=1, 2, \dots, n$ are the coefficients of the independent variables to be estimated.

$$P_i = E(Y = 1 | X_i) = \frac{1}{1 + e^{-(\beta_0 + \beta_i X_i)}} \dots\dots\dots (4)$$

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{e^{Z_i}}{1 + e^{Z_i}} \dots\dots\dots (5)$$

Where $Z_i = \beta_0 + \beta_i X_i$

If P_i is the probability of being surviving and $(1-P_i)$, the probability of growth of a firm

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \dots\dots\dots (6)$$

Therefore, we can write this equation as

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} = e^{Z_i} \dots\dots\dots (7)$$

Later, $\frac{P_i}{1 - P_i}$ is the odds ratio of growth of enterprise with the ratio of the probability that a given firm grow to the probability that the a firm grow. Then, if we take the natural logarithm of equation (e) we obtain

$$L_i = \ln \left[\frac{P(i)}{1 - P(i)} \right] = \ln [e^{\beta_0 + \sum_{i=1}^m \beta_i \chi_i}] = Z_{(i)c}$$

If the disturbance term U_i is taken in to account the logit model becomes

$$L_i = Z_{(i)} = \beta_0 + \sum \beta_i \chi_i + U_i$$

Consequently, L_i , which is the log of odds ratio, is called logit or logit model (Gujarati, 2004). Hence, the above Logit Model is employed to estimate the effect of the hypothesized explanatory variables on growth of enterprises.

The dependent variable is a dichotomous variable that represent the growth of MSE that is measured in terms of change in employment size. Taking the calculated growth in employment, Micro and small scale enterprises are classified in to two categories i.e., growing (if $gr > 0$) and not growing (survival) (if $gr \leq 0$) following Cheng (2006) growth classification and represented in the model by 1 for the growing and 0 for survival Micro and small scale enterprises. In addition to initial size and age of the firm a broad categories of variables that shall have effect on Micro and small scale enterprises employment expansion was considered and measured. These are demographic variables which includes gender of the owner which was classified in to male owned, female owned or mixed of both sex owned. Age of the owner was measured in terms of years. Marital status of the owners was measured by categorizing firms' owners' in to married, unmarried and divorced.

The other variables include economic variables such as the financial accessibility of firms' either in the form of formal (banks, credit and saving share company, Micro finance institutions) and informal (from friends and relatives, iqub(traditional saving), contribution by partners). Firms' initial capital is the starting capital of firms during their beginning measured in terms of birr. Separation of firms' finance from household finance is measured whether the owner separate the firms finance from household expenditure or not. Human capital variables includes business experience of the owner measured whether the firm have prior experience or not, owners' on work training attendance is measured by classifying in to those who never attend, who rarely attend and sometimes

attend.

Enterprises variables include business record keeping measured whether the firm has business record keeping or not. Firms' conduct of market research is measured whether the firms conduct market research before operation or not. Type of the sector is measured by classifying firms in to different sector category of Micro and small scale enterprises which includes urban agriculture, service, manufacturing, trade and construction. Type of the business measured by classifying firms in to the different categories of the business which includes sole proprietorship (those which is owned only by one person), partnership (those owners who came together for a common objective may be two or more), Cooperative (those owners which are organized together depending on the principle of cooperative). Location of firms is measured by classifying firms in to the main road (traditional market areas) located, near the second road and other internal roads (non market areas) located, home (where the owners' are living) located. Firms' product diversity is measured by categorizing firms in to those which diversify their product or not.

Results and Discussion

Employment growth of firms

The survey next looked at the dynamics of firms in terms of employment expansion. Table 1 reports the employment at start, current employment, and their growth. The total employment in the sample establishments rose from 915 when start to 1162 current, and this is 27% growth for the entire duration in their business. Dividing the growth of employment of each firm to the number of years in business gives annual average growth of 4% since start-up. The finding of this study is comparable to that of Micro and small scale enterprises Employment growth in other Ethiopian urban areas, reported in Paul and Rahel, 2010 which found that 25% increment in the number of total employment they created since their establishment with an average annual employment rate of 11.72% and Gebreyesus,2007 which also verified the total employment growth of firms since start is 25% with annual employment growth of 9% in major urban areas of Ethiopia such as Addis Ababa, Hawasa, Mekele and others. The average number of employees at start up for all firms is 5.4 with 6.19 standard deviations while the average number of employees currently is 6.9 with 6.4 standard deviations. In addition the majority of enterprises in the study area are not growing (survival type) which accounts 63.9% as compared to the growing firms which accounts 36.1%.

Table 1 Employment Growth of all firms

	Employees at start up	Employees currently	Total employment growth (%)	Annual Average employ ment growth (%)	Growing N %	Survival N %	N
All firms	915	1162	26.9	4	61 36.1	108 63.9	
Mean	6.1	6.4					
SD	5.1	6.9				169	

Source: Own survey,

Employment growth by gender of the owner

Besides this the study also analyzed the employment growth of firms across gender of the owners. Firms' growth is also different across owners' gender. Male owned firms grew by 6.1% annual average employment growth, while that of female owned grew by only 4.6 %. Therefore firms which were male owned grew faster than those female owned firms in which the majority of male owned firms are growing which accounts 36% as compared to female owned firms which accounts 21% .(table 2).Hence the study result is consistent with McPherson, 1996; Liedholm and Mead, 1993; Liedholm, 2002 which found that male headed enterprises grew more rapidly than female-headed, even after controlling for the effects of other factors such as, sector, location etc. Therefore in this specific survey also the female headed Micro and small scale enterprises have a slightly smaller tendency of growth as compared to male headed. The chi-square test shows there is a significant difference between male owned and female owned enterprises in terms of growth with $X^2=33.8$ and p value .000.

Table 2 Employment growth by gender of the owner

Category	Employees at start up	Employees currently	Total employment Growth (%)	Annual average employment growth (%)	Growing survival				N
					N	%	N	%	
Gender owned Male	147	201	37	6.1	22	36	28	25	50
Gender owned Female	179	229	28	4.6	13	21	19	18	32
Gender owned Mixed	589	732	24	4	26	43	61	57	87
Total	915	1162	27	4	61	100	108	100	169
Mean								2.21	
SD								0.87	
X2								33.8	
P value								.000	

Source: Own Survey,

Employment growth and age of the owners

Table 3 provided the employment growth of firms across different age categories. The result indicates that the annual average employment growth of firms is higher for young age group of the owners whose age ranges from <=29 years old which accounting to 5.1%. In line with this the growth is also high for middle age group of the owners with 30-40 years old which is 4.6% annual average growth and the growth reduces as the age of the firms owners increases for instance for the age group greater than 41 growth was found to be as least as 3.3% annually. In addition the young owned enterprises are more growing firms as compared to other age group owned enterprises which accounts 48% followed by the middle age group which constitutes 39%.

Table 3 Employment growth by age of the Owner

Category	Employment at start up	Employee currently	Total employment Growth (%)	Annual average employment growth (%)	Growing Survival				N
					N	%	N	%	
Age <=29	479	615	28	5.1	29	48	56	51	85
Age 30-40	324	424	31	4.6	24	39	44	47	68
Age >=41	112	123	10	3.3	8	13	8	57	16
Total	915	1162	27	4	61	100	108	100	169
Mean	1.59								
SD	0.65								
X2	.243								
Pvalue	.000								

Source: Own Survey,

Employment growth and educational status of the Owner

The relationship between Education level of the owners and employment growth was also examined. The study found that owners with high school level of education have registered high annual employment growth rate which accounts 6.5% followed by owners with elementary and TVET school level of education which is 4.6 and 4.4% of annual employment growth respectively. Owners with degree and diploma levels of education have registered 4.2%, 4%, annual employment growth on average respectively. However owners with illiterate level of education have recorded a small proportion of annual employment growth which is 3.6% (table 4). This result is consistent with findings of McPherson, 1996 which stated that completion of high school positively affect Micro and small scale enterprises. Parker, 1995 also found positive effect of high school completion on firm growth. Both these reported that completion of primary school have no effect on firm growth while Vocational training is found to affect Micro and small scale enterprises expansion (McPherson, 1996). In line with this the great majority of owners' with high school levels are also growing which accounts 39% followed by elementary which constitutes 21%. Owners with illiterate level of education are less growing as compared to other educational level of the owners'. The study result implies that education is important factor for firm growth.

Table 4 Employment growth by educational status of the Owner

	Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual employment growth (%)		Growing		Survival		N
					N	%	N	%	N	%	
Education	Illiterate	36	40	11	3.6	4	7	7	7	7	11
	Elementary(1-8)	211	256	21	4.6	13	21	24	22	37	
	High school(9-12)	399	512	28	6.5	24	39	45	42	69	
	Diploma	33	37	12	4	3	5	6	5	9	
	TVET	173	240	39	4.4	11	18	19	18	30	
	Degree	63	77	22	4.2	6	10	7	7	13	
	Total	915	1162	27	4	61	100	108	100	169	

Employment growth and marital status of the Owner

The firm employment expansion is also varies across the marital status of the owners. Hence high annual employment growth is observed among the married owners which accounts 6.8%. But the unmarried annual employment growth is 3.8%. The divorced owners' constitute a small annual growth in terms of employment expansion which is 2.7% (table 5).

Table 5 Employment growth by marital status of the Owner

	Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Unmarried owners	524	647	23	3.8	86	
Divorced and others owners	69	82	19	2.7	15	
Total	915	1162	27	4	169	
X ²						338
P value						.000

Source: Own Survey,

Employment growth by business experiences of the Owner

Owners of enterprises which have business experiences accounts 7.6% of annual employment growth which is higher than owners which have no previous business experiences that accounts 4.1% annual average growth. Thus firms whose owners have previous business experiences are grown faster than firms with non business experience owners. This may be due to firms' owners who have the business experiences can handle their customers effectively and able to easily learn from their previous failures and success. The result of this study is also supported by Parker, 1995 which reported that entrepreneurs with previous business experience grow faster than those who were previously unemployed.

Table 7 Employment growth by business experiences of the Owner

	Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Inexperienced owners	774	967	25	4.1	142	
Total	915	1162	27	4	169	

X² .297

P value 0.062

Source: Own Survey,

Employment growth and product diversity of the firms

Table 8 gives employment growth of the firms across firms' product diversity. Hence the annual average

employment growth is higher in those firms' which diversify their products that accounts 5.3%. This annual employment expansion is more than two times of firms' who do not diversify their products that accounts 2.6 %.

Table 8 Employment growth by product diversity of the firms

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Firms' product diversity					
Those which diversify their product	215	294	37	5.3	40
Those which do not diversify their product	700	868	24	2.6	129
Total	915	1162	27	4	169

Source: Own Survey,

Employment growth and location of the firms

As indicated in table 9 firms located around the main road(in commercial areas) have shown more employment growth which accounts 7.5% as compared to firms located around the second road and home which constitutes 4.5% and 4% of employment growth respectively. The result of this study is similar to Liedholm and Mead, 1993; Liedholm, 2002, McPherson, 1996 which found Micro and small scale enterprises operating in traditional markets (in commercial areas) grew faster than home-based firms.

Table 9 Employment growth by location of the firms

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Firms' Location					
Located around main road	243	317	30	7.5	52
Located around the second road	531	672	27	4.5	101
Located around home	139	173	24	4	16
Total	915	1162	27	4	169
X ²					90.5
P value					.000

Source: Own Survey,

Employment growth and firms' sector type

In terms of sector difference employment growth of the service sector is the most dynamic followed by manufacturing. Service firms grew by 6.7% followed by manufacturing and construction sectors with 5.8 % and 4.2 % growth respectively. The annual employment growth of trade sector is 3.4%. Urban agriculture sector, however, grew by only 2.8 %, which is almost about 1/3 of the service sector. This finding is consistent with Liedholm and Mead, 1993 and 1998; Liedholm, 2002, Gebreyesus,2007 which verified that Micro and small scale enterprises operating in manufacturing and service grow faster than those in trade and other sectors but contrary to McPherson ,1996 which found no clear sector difference of growth in a more disaggregated sector.

Table 10 Employment growth by firms' sector type

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Firms' Sector type					
Urban agriculture	29	33	14	2.8	5
Service	150	221	47	6.7	39
Manufacturing	155	210	35	5.8	24
Trade	124	145	15	3.4	49
Construction	457	553	21	4.2	52
Total	915	1162	27	4	169
X ²				20.14	
P value				.010	

Source: Own Survey,

Employment growth and firms' sector initial size

The study has also analyzed the growth of firms across size categories by comparing the growth of micro enterprises with small enterprises depending on the definition of the Central Statistics Authority and Ministry of Labor and Social Affairs in 1997. Hence the finding stated that employment growth is independent of firms' initial size that is employment growth decreases by size. The annual employment growth for micro enterprises is 6.6% which is three times greater than that of the annual employment growth for small enterprises that registered 2.2% which is contrary to mead findings which says those enterprises which started small in size stayed small. This negative relationship between growth and size is supporting evidence for the learning process argued by Jovanovich (1982).

However, growing empirical literatures clearly showed that there is significant negative relationship between firm growth and firm size, which is contrary to Gibrat's law (Evans, 1987; Hall, 1987; Kumar, 1985; Dunne and Hughes, 1994). Failure of the Gibrat's law gave a way to a 'learning theory' by Jovanovic (1982), which proposes managerial efficiency and learning by doing as key factors that determine firm growth. This is also supported by the result that among the growing enterprises the majority of Micro firms are growing which shares 90% as compared to small firms that constitute only 10%. The T value shows that there is a significant variation between Micro and small scale enterprises employment growth and their initial size with .000.

Table 11 Employment growth by firms' sector initial size

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average Survival employment growth (%)		Growing		N	
				N	%	N	%		
Firms' initial size									
Micro enterprises(<=10)	651	865	33	6.6	55	90	95	88	150
Small enterprises(11-50)	264	297	13	2.24	6	10	13	12	19
Total	915	1162	27	4	61	100	108	100	169
X ²									2.59
T (-16.6)									.000
P-value									0.273

Source: Own Survey

Employment growth by firms' business ownership

Business type is also another variable analyzed in the study. Thus partnership type of business has shown a more annual employment growth which is 4.6% as compared to cooperative type of business which registered 3.4%. The sole proprietorship type of business never show any change in terms of employment expansion (table 12). Similar result verify that among the growing firms partnerships type of business is more growing than cooperative which accounts 67%. The sole proprietorship type of enterprise is survival.

Table 12 Employment growth by firms' business type

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average survival employment growth (%)		Growing		N	
				N	%	N	%		
Firms' business type									
Sole proprietorship	3	3	0	0	3		3		3
Partnership	683	875	28	4.6	41	67	72	66	113
Cooperative	229	284	24	3.4	20	33	33	31	53
Total	915	1162	27	4	61	100	108	100	169
X ²									.971
P-value									.410

Source: Own Survey,

Employment growth and firms' access to finance

Access to finance is very essential for the growth of Micro and small scale enterprises. In this study attempt has been made to look at employment growth and in relation to access to finance. Hence as shown in table 13 the

annual average employment growth is higher for firms who have access to finance from saving and credit Share Company and other Micro financé institutions which account 7.2% followed by those which got their capital from friends and relatives which also account 6%. The annual employment growth of firms' who got their capital from NGOs is 4.6%. Firms' whose source of finance is iqub (traditional saving institution) registered 4.2% annual employment growth. Even though the main source of finance for firms is subscription by partners' enterprises that got their capital from this accounts only 3.8% of annual employment growth. Thus access to credit of firms from credit and saving share company positively affect the employment growth of firms. The study result is supported by the other findings such as Biggs and Srivastava, 1996. According to this previous study managers of micro and small scale enterprises Micro and small scale enterprises in Africa perceive credit access among the key obstacles and often put among the primary list that obstacle business growth. A number of empirical studies test the sensitivity of investment to internal financial resources such as, profits in the absence of external resources. The availability of internal financial resource has been found to affect investment on manufacturing sector in Africa positively.

Table 13 Employment growth by firms' access to finance

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Firms' finance access					
Subscription by partners	339	404	19	3.8	95
Support from NGO	26	32	23	4.6	7
Credit and Saving Associations	276	374	36	7.2	25
Credit from friends and relatives	231	300	30	6	32
Iqub	43	52	21	4.2	10
Banks	-	-	-	-	-
Total	915	1162	27	4	169
X ²				9.36	
P-value				.312	

Source: Own Survey,

Employment growth and firms' firms' age

In terms of firms' age the younger enterprises with 5 and fewer years old have grown by about 5.6 %. This is more than enterprises with 6-8 years old age group which is 4.2%. Firms' whose age is >=9 years old have shown only 1.2% annual employment expansion. Hence, the study result showed that firms' growth decreases with age of the firms'. This finding on age of firms is similar to (Arbaugh and Sexton, 1996. Similar finding shows that among the growing enterprises young share a high percentage which accounts 89% which is more than 10 times higher than older firms that accounts 8% and 3% respectively.

Table 14 Employment growth by firms' firms' age

Category	Employment at start up	Employment currently	Total employment Growth (%)	Annual average Growing employment growth (%)	Survival N	N
Firms' age						
<=5	716	920	28	5.6	54 89	83 77 137
6-8	154	192	25	4.2	5 8	17 16 22
>=9	45	50	11	1.2	2 3	8 7 10
Total	915	1162	27	4	61 100	108 100 169
X ²						2.29
P-value						.000

Source: Own Survey,

Employment growth and owners' on work training attendance

Owners' on work training attendance is also considered as a growth determinant of Micro and Small scale enterprises'. Thus owners on work training attendance have been categorized in to those who never attend on work training, those who rarely attend on work training and those who sometimes attend on work training. Hence with regard to employment growth in terms of owners training attendance those who participate on work training sometimes have shown more annual employment growth which accounts 13.6% as compared to those operators who rarely and never attend on work training which brought 11.8% and 3.3% annual employment growth respectively.

Table 15 Employment growth by owners' on work training attendance

Category		Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Owners' on work training attendance	Owners' who never attend	562	619	10	3.3	107
	Owners' who rarely attend	236	347	47	11.8	43
	Owners' who sometimes attend	117	196	68	13.6	19
	Total	915	1162	27	4	169
X ²					3.38	
P-value					.000	

Source: Own Survey,

Employment growth of firms and initial capital

Firms' initial capital influence on growth is also tested in this study. Thus there is a positive relationship between firms' initial capital and the employment expansion. Accordingly enterprises with relatively high initial capital have shown a more annual average employment growth of 9.6% as compared to those which have a small initial capital which grew by 6.01% annually on average (table 16).

Table 16 Employment growth by firms' initial capital

Category		Employment at start up	Employment currently	Total employment Growth (%)	Annual average employment growth (%)	N
Firms' age	<=50,000	732	996	36	6.01	162
	50001-100,000	105	166	58	9.6	7
	Total	915	1162	27	4	169
X ²					.334	
P-value					.000	

Source: Own Survey,

Growth determinants of Micro and Small Scale Enterprises in the study area

The factors that significantly contribute to growth of Micro and small scale enterprises goes beyond the descriptive analysis and requires employing econometric analysis. As it was discussed in the methodology part of this study, a binary choice logit model is used to identify the major determinants of Micro and small scale enterprises growth. The variables described in the descriptive analysis are used as explanatory variables in logistic model.

Accordingly as output of the model shown in table 17 and table 18 revealed that, among the most influential variables that significantly determine the growth of Micro and small scale enterprises is sex of the owner. The male sex was found to have positive relation with growth status of Micro and small scale enterprises and statistically significant at 10 percent. The odds ratio of the variable "sex of owner" indicates the probability of growth of Micro and small scale enterprises that are owned by male operator is 1.33 times higher than the female owned counterparts and it is consistent with previous studies of Mead and Liedholm (1998) and Mulu (2007). The marginal effect of this variable shows the probability of growth for male owned Micro and small scale enterprises increase by 15.89% as compared to female owned Micro and small scale enterprises. Considering this a number of justifications have been given as to why the female owned Micro and small scale enterprises grow slowly than male owned Micro and small scale enterprises. In this study, women's are more concentrated in least growing sectors such as trading. Moreover, women have dual (domestic and productive) responsibility than men, thus the business objective of women is different from men. As a result, women is risk averse than male to maintain their welfare and survival of the household.

Similarly the growth of firms are also affected by the sector in which it operates. Thus service sector has a positive and a significant effect on firms growth as compared to other sectors at p<5% level of significance. The odd ratio of this variable shows the service sector has 1.15times probability of growth more than any other sectors with marginal effect of 10.4%. Both initial size and age are inversely related to firm growth. This gives evidence that smaller and younger firms grew faster than large firms, and consistent with the learning hypothesis but contrary to the Gibrat's law. The model result shown the probability of growth for Micro and small scale enterprises that are micro and young is 1.94 and 1.33 times higher than their counterpart with P< 1% and 10% respectively.

A marginal effect of these variables shows the probability of growth of micro and young firms increase by 42.4% and 22.4% more than small and older firms respectively by assuming all other factors remains constant. Furthermore firms product diversity, owners' age, owners' marital status and owners' separation of their household expenditure from their business and type of the business didn't show any significant influence on firms growth.

Owners' on work training attendance and owners' previous business experiences affects firms growth positively and significantly at $p < 5\%$ and 10% respectively. The odd ratio shows that experienced and trained owners have 1.85 and 1.47 times probability of growth respectively as compared to their counter parts. Among the human capital variables Owners' educational level especially high school and Vocational training level of education affects firms growth positively and significantly at $p < 1\%$ and $p < 5\%$ level of significance.

Firms located at traditional market grew faster than those located at home areas. Thus firms' location affects their growth positively and significantly at 1% level of significance. The marginal effect of this variable shown enterprise located at traditionally marketed area can show 43.2% probability of growth as compared to their counterparts with an odd ratio of 1.6. The justification behind this is that they can easily get different market and selling opportunities.

From a common understanding conducting the market research before starting operation of their business is very essential for firms' growth. Thus the model output also supports that undertaking market research before starting operation affects firms growth positively and significantly at $p < 10\%$ level of significance. The odd ratio shown that those firms which establish their business depending on the understanding of the existing market opportunity for their product and service has 3.05 times probability of growth as compared to their counterparts with a marginal effect of 24.3%.

Similarly the initial investment size has a positive effect on probability of being growing as the odd ratio show the probability of being growing increase by 1.59 times as the initial investment size increase by 1% . The initial capital also supports firms in order to be graduated from not growing groups to the growing ones which consistent with Barney, 1991 study result. Firms' customer handling and firms access to formal credit from MFIs and from Oromia credit and saving share company grew faster than their counter parts at $p < 1\%$ level of significance. Furthermore firms record keeping affects their growth positively and significantly at $p < 5\%$ level of significance. The justification behind this is that they can easily audit their cost and benefit analysis as well as they are not so much affected by arbitrary and subjective taxing system.

To sum up among the demographic variables sex of the owner significantly affects firms growth whereas owners age and owners marital status effect is insignificant. Similarly among the economic variables firms access to formal credit and firms initial capital or investment, positively and significantly affect their growth while firms' separation of household expenditures from their business failed to have any significant effect on firms growth. Moreover among the human capital variables all of the hypnotized variables namely owners' educational levels, owners previous experiences and owners on work training access affects firms growth positively and significantly. Among firms related variables except type of the business and firms product diversity that have insignificant effect on firms' growth and firms age and initial size that affect firms' growth negatively and significantly all the firms sector type, firms customer handling, record keeping and firms market research before starting operation, firms location have a significant and positive effect on their growth.

Table 17 Summary of all variables in logistic regression model

Variables	B	S.E	Wald	df	Sig	Ex (B)
Sex of owner	.674	.384	3.084	2	.079***	1.96
Firms sector	.694	.340	4.164	1	.041**	.500
Owner age	-.967	.298	10.567	1	0.24	1.57
Owner marital status	-.671	.256	6.856	1	0.18	.511
Firms initial size	-.597	.169	10.405	1	.009*	.579
Owners' on work training	.476	1.99	5.732	2	.07***	.621
<i>Firms product diversity</i>	.731	.338	4.688	1	.33	.481
Owners' experience	.693	.408	2.883	1	.030**	.500
Owners' educational level	.915	.305	8.994	1	.003*	.421
Vocational training	.875	.427	4.199	1	.040**	.417
Firms' Location	.954	.207	12.438	1	.000*	.385
Firms business type	.435	.312	1.949	1	0.163	6.47
Firms Access to credit	.641	2.58	6.094	1	.008*	.501
Firms Initial capital	.531	1.63	10.637	1	.007*	.588
Firms' age	-.143	.502	1.687	1	.082***	.867
Firms customer handling	.961	.326	8.692	1	.003*	3.82
Firms Conduct of market research	.030	.521	3.906	1	.065***	3.59
Business recording	1.022	.389	6.907	1	.048**	.360
Separation of HH exp. From business expenses	.747	.405	3.410	1	.265	.474

*, **and* ** is the 1%, 5% and 10% level of significance respectively

Table 18 Output of the model (Logistic)

Variables	Odds ratio	P>Z	Marginal effect (dy/dx)
Sex of owner	1.326086	.079***	.1589603
Firms sector	1.155172	.041**	.1043283
Firms initial size	2.946428	.009*	.4236013
Owners' on work training	4.121212	.07***	.2346031
Owners' experience	1.853658	.030**	.1768973
Owners' educational level	1.477272	.003*	.1670402
Firms' Location	1.666666	.000*	.4321650
Firms Access to credit	1.894736	.008*	.2536078
Firms Initial capital	1.597337	.007*	.1123162
Firms' age	1.333333	.082***	.2235760
Customer handling	1.545303	.003*	.3684213
Conduct of market research	3.057142	.065***	.2431611
Business recording	2.057142	.048**	.4658023
Separation of HH exp.	3.403105	.065***	.3212670

*, **and* ** is the 1%, 5% and 10% level of significance respectively

Conclusion and Recommendations

The government particularly operating at the local levels should design an awareness creation program to put the already endorsed and existing MSEs development policy and strategy in to effect in order to increase their employment opportunity creation capabilities. The fact that enterprises such as service, manufacturing and construction sectors showed high potential to employment growth implies additional support to these enterprises. Among the challenges of MSSEs overtax, capital shortage, lack of working place, lack of recordkeeping, corruption, lack of market center where to sell their product, lack of formal credit and any other challenges discussed in this study needs an intervention of the concerned bodies. Thus the existing policy should be revised and amended by taking in to consideration all these and any other challenges.

Most of the MSSEs support programs put advancement of women as one of their objective. Unfortunately women-owned enterprises are concentrated on commercial activities with low growth prospect. These programs

should take account of the nature of activities; therefore, the MSSEs formulators should increase the involvement of women in the sectors with high potential for growth than merely on commercial activities rather encourage women to participate in construction and high income generating sectors.

Enterprises located at commercial district and road side or with shop grow faster than those home based. Thus facilitating the creation of commercial centers and cooperative marketing arrangements, establishing market center help in order to improve business expansion.

Finance is always a challenge to MSEs as the formal banking sector never supporting them. In the absence of formal source of credit informal networks appear more appealing for MSSEs. Hence, supporting alternative channels (for example, trade credit and saving and credit share company) that do not involve collateral requirements and strange procedures might help businesses to grow.

References

- Ambo Town Micro and Small Scale Enterprises Office.2013. *Annual report*. Unpublished. Ambo. Ethiopia.
- Assefa Demissie .1997. A comparative Analysis of the Development of the Small Scale Industries in Region 14 with other Regions. Department of Economics, AAU.
- Ayyagari, M. Beck, T.,and Demircuc-Kunt, A. Aug., 2003. Small and Medium Enterprises
- Biggs, T., and P. Srivastava .1996. "Structural aspect of manufacturing in Sub-Saharan Africa: findings from a seven country enterprise survey" World Bank Discussion Paper no. 346, Africa Technical Department Series, World Bank, Washington, DC.
- Central Statistical Authority.2003. Report on Urban Informal sector and Small Scale Manufacturing Industries Survey. Statistical Bulletin No. 282. Addis Ababa.Ethiopia.
- Cheng, R.W. 2006. Determinants of growth in small and medium enterprise: An empirical study logistic industry in Hongkong. Unplished PhD thesis, Curtin University of Technology. Australia.
- Davidsson, P. and Wiklund, J. 2000. 'Conceptual and empirical challenges in the study of firm growth', In Sexton, D. and Landström, H. (Eds).
- Evans, D. E. (1987), "The relationship between firm growth, size and age: estimates for 100 manufacturing industries" *The Journal of Industrial Economics*, 35, 567– 582.
- Fadahunsi, O.1997. "The Challenge of Promoting Entrepreneurship and Small Business: The Common Wealth Experience." *Small and Medium Enterprises Development: Policies, Programmes and Prospects*.
- Federal Micro and Small Enterprise Development Agency. 2006. Support Package For Metal and Wood Work Micro and Small Enterprises under the Micro and Small Enterprise Development Program. The Urban Development Package. Addis Ababa, Ethiopia.
- Federal Micro and Small enterprises Development Agency Establishment council of Ministers 2011: 5766. Federal Negarit Gazeta of the federal democratic Republic of Ethiopia. Regulation No. 201/2011, Addis Ababa.
- Frank, B. 1964. *The Development of Latin American Private Enterprises*. National Planning Association, Planning Pamphlet No 121. Washington DC, USA.
- Freel, M. and Robson, P. 2004 'Small firm innovation, growth and performance.' *International Small Business Journal*, 22(6), pp. 561-575.
- Gebreyesus, M .2007. Growth of micro-enterprises: Empirical evidence from Ethiopia. Development Research Institute (EDRI).
- Geiger T. and Armstrong W. 1964. *The development of African Private Enterprises*. National Planning Association, Planning Pamphlet No 120. Washington, DC.
- Goffee, R., & Scase, R.1995. *Corporate Realities*, London, Routledge
- Hailay Gebretinsea PhD.2007. *Entrepreneurship and Small Business Management in Ethiopia*. Mekele University, Ethiopia.
- Hall, B. H. 1987, "The relationship between firm size and firm growth in the US manufacturing sector" *Journal of Industrial Economics*, 36, 583– 606.
- Hall, G.1992. 'Reasons for Insolvency amongst Small Firms'. *A Review and Fresh Evidence*, *Small Business Economics* 4(3):237-250.
- Hallberg, H. 2000. *A Market Oriented Strategy for Small and Medium Scale Enterprises*. International Finance Cooperation. World Bank : Washington DC.
- High Level Commission on Legal Empowerment of the Poor (HLCLEP).2006. Background Issue Paper on Legal Empowerment of the Poor: Entrepreneurship. Draft Document. Addis Ababa, Ethiopia.
- Holmes, S. and Zimmer, I.1994. 'The nature of small firm: Understanding the motivations of growth and non-growth oriented owners.' *Australian Journal of Management*.
- Husmanns R. and Mehran F. 2005. *Statistical Definition of the Informal Sector*. International Labor Office, Bureau of Statistics, Geneva, Switzerland.
- ILO.1986.*The Promotion of Small and Medium Sized Enterprises*.International Labor Conference.72nd Session, 1986. Geneva: ILO Publications.

- ILO.2002. Jobs, Gender and Small-Scale Enterprises in Africa: Women Entrepreneurs Preliminary Report MTI,(Women’s Affairs Department, (WAD) and ILO. Addis Ababa, Ethiopia.
- Jovanovic, B. (1982), “Selection and the evolution of industry” *Econometrica*, 50, 649– 670.
- Katwalo A.M and Madichie N.O.2008. Entrepreneurial and cultural dynamics: a gender kaleido scope of Ugandan microenterprises. *International Journal of Entrepreneurship and small Business*, 5(3): 337-348.
- Kolvereid, L.1992.Growth aspirations among Norwegian entrepreneurs, *Journal of Business Venturing*, Vol. 7, No. 4, pp. 209 - 222.
- Kolvereid, L. & Bullvag, E.1996. Growth intentions actual growth: the impact of enterpreneural choice, *Journal of enterprising Culture*, Vol. 4, No. 1, pp. 1- 17.
- Kumar, M. S. 1985, “Growth, acquisition activity and firm size: evidence from the United Kingdom” *The Journal of Industrial Economics*, 33, 327– 338.
- Liedholm, C. 2002, “Small firm dynamics: evidence from Africa and Latin America” *Small Business Economics*18: 227-242.
- Liedholm, C. and D. Mead .1993, “The structure and growth of microenterprises in southern and eastern Africa: evidence from recent surveys” Working Paper No. 36, GEMINI.
- Masurel, E. & Montfort, K.V. 2006. Life cycle characteristics of small professional service firms, *Journal of Small Business Management*, Vol. 44, No. 3, pp.461 – 437.
- Maddala.1992. Formula for Multicollarity tests for covariate variables.Users’ difficult in SPSS test of logistic regression.
- Manning, C & Mashego, P. 1993. Manufacturing in Micro-Enterprises in South Africa. Report Submitted to the Industrial Strategy Project, University of Cape Town.
- Mccormick, D. 1998. Enterprise Clusters in Africa: Linkages for Growth and Development. Paper presented at the Conference Enterprise in Africa: Between Poverty and Growth Centre for African Studies, University of Edinburgh.
- McPherson, M. 1996. “Growth of micro and small enterprises in southern Africa” *Journal of Development Economics*, Vol. 48, 253-277.
- Mead, D. C. and Liedholm, C. 1998. Dynamics of micro and small enterprises in developing countries. *World development*, 26(1), pp. 61-74. *Journal of Economics and Sustainable Development*.
- Ministry of Trade and Industry .2006. Micro and Small Enterprises Development Strategy. Addis Ababa, Ethiopia.
- Niskanen, J .2007. The determinants of firm growth in small and micro; Firms evidence on Relationship lending effects, *Small Enterprise Development* , Vol. 24.
- Nyabwanga, R., N. 2011. An assessment of the effect of working capital management practices on financial performance. A study of small scale enterprises in Kisii South district, Kenya.Unpublished MBA project, Egerton University Kenya.
- Parker, J. 1995. Patterns of business growth: Micro and small enterprises in Kenya. Unpublished doctoral dissertation, Michigan State University, Lansing, Michigan.
- Paul I. and Rahel Wasihun. 2010. Growth Determinants of Women-operated Micro and Small Enterprises in Addis Ababa. *Journal of Sustainable Development in Africa*.Rogerson
- Rweyemamu. J.F. 1980. Industrialization and income distribution. Codesria Publisher, Dakar, Senegal.
- Swierczek, F. W. & Hall, T. 2003. Entrepreneurial orientation, uncertainty avoidance and firm performance: an analysis of Thai and Vietnamese SMEs. *International Journal of Entrepreneurship and Innovation*, 4(1):46-58.
- Watson, Jeff. 2001. How to Determine a Sample Size: Tipsheet #60, University Park, PA: Penn State Cooperative Extension.
- Workneh Fessha .2007. The constraints of Micro and Small-Scale Enterprises in Addressing Employment Opportunities: The case of Kolfe Keranyo Sub-city. AAU, Addis Ababa.
- World Bank.2004.Employment and Development of Small Enterprises. Sector Policy Paper. The World Bank, Washington D.C