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Growth Determinants of Small and Micro-enterprises in Ankober Woreda, North Shoa Zone of Amhara Region, Ethiopia

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Abstract

Small and Medium enterprises are important actors in the industrial development and plays vital role for entrepreneurial economy especially in developing countries. However, its growth can be constrained by a numbers of internal and external factors. Retrospective study was conducted to determine the current growth status and examine factors affecting the growth of Small and Medium Enterprises in Ankober woreda, Amhara region, Ethiopia in April 2023. Data were collected from a total of 56 SMEs owners/managers selected using stratified followed by simple random sampling technique from different business sectors. Retrospective information of the SMEs from the managers and archive was gathered as input for descriptive and multiple linear regression analysis to test the effect of constraining factors on their growth in the study area. The overall growth rate in terms of the number of labor employment reveals good progress (2.8), animal fattening sector being slower than others. The growth rate of enterprises in terms of sale turnover hence yearly profit is also in a logarithmic growth condition (14.3), milling sector being the wealthiest (33.8) and animal fattening relatively poorest (6.7). While size of the enterprises and access to market significantly enhanced growth of their annual sale/turnover, other factors like age of the firm, human capital, managerial competency, infrastructure and access to external finance sources are found to adversely affected the growth of small and medium/micro enterprises in terms total product to sale or numbers of services/yearly profit growth measurement. Econometric analysis also reveals that SMEs growth by numbers of employee's measures of performance found to adversely distress by longer age enterprises, size of the firm and poor managerial competency of owners/managers of SMEs. This suggests small and medium enterprises development and extension bureau in Ankober woreda are expected to transform older and recruit the newer, link them with lending financial institutions and facilitate entrepreneurship skill upgrading training to keep the growth of SMEs in the area. Meanwhile further investigation should be kept up to get unequivocal evidence on other contributing factors influencing the growth of SMEs in Ankober and neiboughring woredas.

Keywords: *Ankober, constraining factors, Ethiopia, growth, SMEs enterprises*

1. Introduction

Small and medium/micro enterprises (SMEs) are entrepreneurial business entities organized for the purpose of producing goods and providing services as well as job opportunities for the communities. Therefore, they are being considered as engines of poverty reduction, business development and employment creation worldwide (Chittithaworn, 2011). Its contribution reaches nearly 50% of GDPs for most of African economy and 60% of their labor employment (Muriithi,

2017). It also contributes to 55% of national GDP and about 65% of total employment in developed countries. Moreover, SMEs accommodates huge numbers of local labor force and has an integral role in any sustainable growth trajectory being 'the missing link' for inclusive growth (ITC, 2018).

Ethiopian government has made efforts for the promotion and development SME sector to grow at a higher pace in achieving Growth and Transformation Plan II (GTPII) (Gebreselassie, 2020). Additionally, these enterprises are planned to create job opportunity to millions of young generations so that it helps in realizing sustainable development goals in Ethiopia (Melese, 2018). Therefore, SMEs covers 99 % of contribution in the creation of job opportunity for youth's as compared to large enterprises (1%) in Ethiopia (Tekola and Gidey, 2019).

Despite huge numbers of SMEs (31,863 small businesses and 974,676 micro enterprises) organize and established in Ethiopian economy, they a variety of challenges at both the start-up and operational levels (Fufa, 2015). Large numbers of small and micro/medium enterprises are facing difficulties to survive, letting alone expending their business, for a numbers of reasons in low-income countries. The statistics show that round 69 % of SMEs in Ethiopia are survival variants (Tefera *et al*., 2013).

Growth of SMES can be constrained by a number of contributing factors that can be external or internal. The relationship between size and age of SME, with their growth pattern was first started with the law of Gibrat (Hurgessa, 2022). It concluded that a firm growth is independent of its size at the early periods. But this law was not accepted by many other researchers. There are also other external factors.

Environmental factors that may have direct or indirect contribution for the growth and performance and growth SMEs include access to external source of finance, infrastructure, Policy and regulatory challenges, Marketing challenges, Human resources capacities and social factors. Performance of SMEs is not merely a function of the business environment. But also depends on the activities and systems structured with in the enterprises including quality of the human capital, educational status, work experience, business training, entrepreneur ability, Managerial capacities, and communication ability and Marketing skills (Ferejo *et al.*, 2022).

Nobody can put common and standardized measurement to evaluate the growth of SMEs. This may be associated to the presence of multi-dimensional aspects of performance. As a result, it would be better to measure growth can be using various tools depending up on the objectives that firm follow (Yirgalem and Viswanadham, 2016). Financial and non-financial measures of performance include but not limited to sales volume, total yearly profit, total assets, numbers of employees, return on investment, employed capital, share on the market, satisfaction of customers, productivity, sales turnover, employees' turnover and other. Most studies suggested using hybrid growth measurements to evaluate the performance. However, growth rate in sales, increase in capital assets and profits are more precise and potential measurements of firm's performance as compared to other (Carter and Jones-Evan (2000).

Even though, Ethiopian government is striving to expand and grow SMES's, intensively working to create enabling environment for their sustainability, they are still persistently suffering from multi-dimensional challenges and problems that restrain their growth, productivity, and sustainability. Thousands of SMEs formally registered in North Shewa zone of Amhara region until recent times, like other parts of Ethiopia, most of them are struggling to survive ignoring the idea of expansion and growth, and only a few are doing well, some of them were closed up as the result of daunting internal and external factors. There are also some quiescent and under growing SMEs that are unable to meet the intended objective for which they were established. Identifying factors constraining the growth of SMEs will be critical in tailoring wise remedial actions to policy makers. Besides, many SMEs related research conducted in Ethiopia were mainly focused only in the large cities, not at district level. Despite pervasiveness of the

problem, no clear information is available on the real cause/constraining factors behind. Therefore, this study was planned to figure out explicit evidence helping policy makers and other stakeholder formulating cost effective, cost utility and proactive measures at zone level, specifically in Ankober of Amhara regional state in Ethiopia.

General Objective

This study was aimed at assessing the growth status and identify constraining factors affecting the growth of small and medium/micro enterprises in Ankober woreda, central Ethiopia.

The specific objectives of the study are

- To assess the growth status of Small and medium/Micro Enterprises and
- To examine constraining factors affecting the growth of Small and medium/Micro Enterprises in Ankober woreda

2. Research Methodology

2.1. Research design and study area

Combination of retrospective and cross-sectional study design was applied to evaluate the growth condition of small and micro enterprises and determine factors affecting their growth. Growth status was determined through archival analysis of their previous year's ledger and document gained from Ankober woreda SMEs development directorate. The apparent growth status and other constraining factors for the growth of these enterprises were examined by analyzing the collected data through semi- structured questionnaire survey in April 2023. The study was conducted in Ankober Distric Amara regional state (Fig. 1).

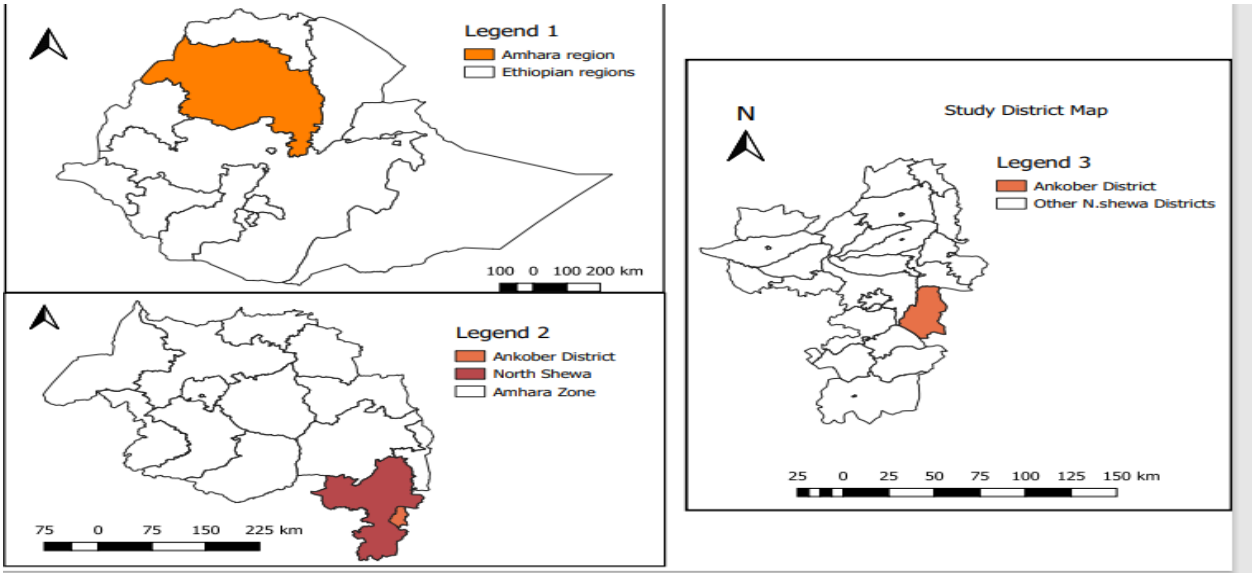

Figure 1. Map of the study area in central Ethiopia (GIS, 2023)

2.2. Sampling procedure and sample size

The study was concerned on registered small and micro enterprises located in Ankober district as the target population. In the first stage actively working seven (Haramba, Hagere selam, Mesicha, Zoma, Gorgo, Aliyu Amba and Gorebella) from a total of 23 rural and semi urban kebeles was selected purposively. All sector groups of SMEs were represented at least once in the study. These includes construction, wood and metal work, livestock fattening, miller house and others engaged on different businesses like boutique and wholesale-retailing activities. Then strata using the business type were created to allocate proportionate sample to each SMEs sector. The questionnaire was administered by face-to-face

interviews to the 56 enterprise owners and managers recruited from each of the study kebeles. The original English format questionnaire was translated into Amharic language for ease of understanding and communication between the data collectors and respondents.

The researcher utilized cluster sampling followed by stratified sampling techniques to select representative samples from the five strata based on the type of business. The total sample size was calculated using the formula given by (Yamane, 1967).

$$n_o = \boldsymbol{Z^2 \frac{p*q}{d^2}}$$

Where: Z = 1.96 value for selected alpha value of .025 in each tail (95% degree of confidence)
P*q= estimate of variance = 0.25= (0.5*0.5)
d= acceptable margin of error for proportion being estimated, 5%=0.05 after substituting all the above parameter values, it gives us the initial sample size as depicted below.

$$\mathbf{n_o = 1.96^2 \left(\frac{0.5*0.5}{0.5^2}\right)} \text{ Then}$$

$$\mathbf{n_o = 384} \text{ ------- initial sample size}$$

But the number "n_o" should be modified to "n" according to the following equation and assuming response rate R=0.96 and population, N = 63, $n = \left(\frac{384}{1+\frac{384}{population}}\right)/(R)$, the final sample size remains n= 56. Since the number of SMEs in each category of business is not the same, the number of samples for each business type is calculated with the formula: $n1 = \frac{nN1}{N}$, Where n= total number of samples, N= total number of SMEs, N1= total number of SMEs in each category, n1= number of samples in each category.

Table 1. The total number of SMEs sample taken from each category

Business Category of SMEs in Ankober district	Total number of registered SMEs in each category	Sample size taken from each category
Construction	6	5
wood and metal work	10	9
ruminating animal fattening	23	20
miller house	3	3
Others (boutique, food, retail, …)	21	19
Sum	63	56

From the total of 56 SMEs, individual sample sizes are gained using its ratio. Therefore, sample for construction sector (6/63)*56, wood and metal work (10/63)*56, ruminating animal fattening (23/63)*56, miller house (3/63)*56 and (21/63)*56. Accordingly a total of registered 56 SMEs comprising of construction (5) wood and metal work (9) ruminant animal fattening (20), miller house (3) and other including restaurants and boutiques (19) were selected in the study area.

2.3. Model specification and Measurement of variables

Collected raw data entered to Microsoft excel spread sheet for easy descriptive and inferential analysis using STATA version 14. OLS multiple linear regression was conducted to test the relationship between the response and explanatory variable. $\boldsymbol{Y = \alpha + \beta 1 HCF + \beta 2\ MCF + \beta 3\ FF + \beta 4\ InfrF + \beta 5 MF + \varepsilon}$

Where Y, is the response variable for firm i, α is the constant term, $\beta 1 - \beta 5$ is coefficient of explanatory variables of factors that the researcher needs to calculate and ε is the normal error term.

In this study, dependent variable "firm's growth" was measured by total product or service turn over and sale/ change in capacity to employ more labor (Davidsson, 1991; Haibo and Gerrit, 2009). Growth is defined as the ratio of employment change between start up and during time of survey with age of the enterprise in studying SMEs in developing countries (McPherson, 1996). That is Growth=

$$\frac{\mathbf{ln(\text{current employment}) - ln(\text{intial employment})}}{\mathbf{\text{firm age}}}.$$

With regard to change in yearly total sale growth/hence total profit with age of the firm depicted as

$$\text{Growth} = \frac{\mathbf{ln(\text{current sales}) - ln(\text{intial sales})}}{\mathbf{\text{firm age}}}$$

Independent variables which basically include internal factors like firm size, firm age, entrepreneurial characteristics, human capital, management competence and external factors like access to external sources of finance, access to market and infrastructure condition.

Reliability of the data was measured by the most widely used Cronbach's alpha tool with a generally agreed lower limit of 0.7. Accordingly, the data set in this research is stable and consistent with the value of if α= 0.78 and 0.79 which is greater than the minimum standard of 0.7.

3. Result and discussion

3.1. Demographic characteristics of the respondents (managers/owner of the enterprise)

The result indicated that the involvement of females in SMEs in the study area was less than males and recorded as it is below the regional and national range of gender distribution in entrepreneur and employment quota (Table 2).

Table 2. Demographic characteristics of respondents (business owners/enterprise managers)

variables		Frequency	Valid %
Gender	Female	11	19.6
	Male	45	80.4
Age in years	21-30	10	17.9
	31-40	41	73.2
	Above 41	5	8.9
Educational status	TVET level	16	28.6
	2^0 school level	20	35.7
	1^0 school level	5	8.9
	University level	15	26.8

Age distribution of respondents in this study describes that most of the operators (73 %) in SMEs are at younger stage, actively working time so that can significantly contribute for economic development. The finding is in agreement with almost similar condition evident in Nairobi County, Kenya in which 40.6 % of the entrepreneurs with in SMEs are younger and between the age of 31-40 years old (Bramuel, 2013). This implies that organizing youths in cooperation (SMEs) is minimizing unemployment in the area. The researcher can also conclude that the situation does not allow elders to engage in cooperative enterprises and they do not enjoy it too.

The finding illustrates that almost all of the owners/managers of SMEs are achieved education from high school to university level meaning that all are academically literate. However, the research lacks to get detailed information on their additional entrepreneurial and managerial training, knowledge and practice. Empirically, there is a relationship between educational status of SMEs operators and their growth. Many studies also show that owners with a better educational background tend to be more efficient and that formal education allows them to enhance their production, management, and marketing skills. Furthermore, King and McGrath (2002) argue that more educated and trained owner or manager of enterprises are highly successful. Fufa (2015) in his study also supports the argument that states higher education improves the firm's performance as well as external possibilities such as employment prospects. Low education levels and occupational training strongly influenced the chance of becoming an entrepreneur rather than an

employee.

According to this finding, the majority of SMEs owners/operators are engaged in livestock fattening sector followed by other services implying livestock rearing is the dominant activity of the study area followed by other service sectors while others were found to be a less significant in attracting enterprise owners to engage (Fig.2).

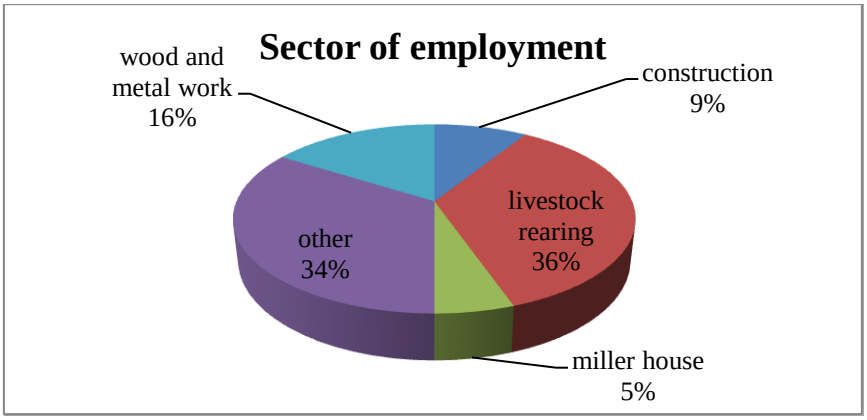

Figure 2. The proportion of different Sectors of the SME owner respondents' engagement in Ankober Woreda.

The finding indicates that most of the enterprises got their first startup capital from banks and almost equally from their family, personal saving and other informal finance sources like Iqub (Fig 3). In fact, data collectors interview result dictates that most of the entrepreneurs/SME owners prefer to launch the business by their own saving or borrowing from their family/relative rather than from financial institutions like banks and micro finances. This is associated to the intricate bureaucratic system, long process and collateral requirement of banks.

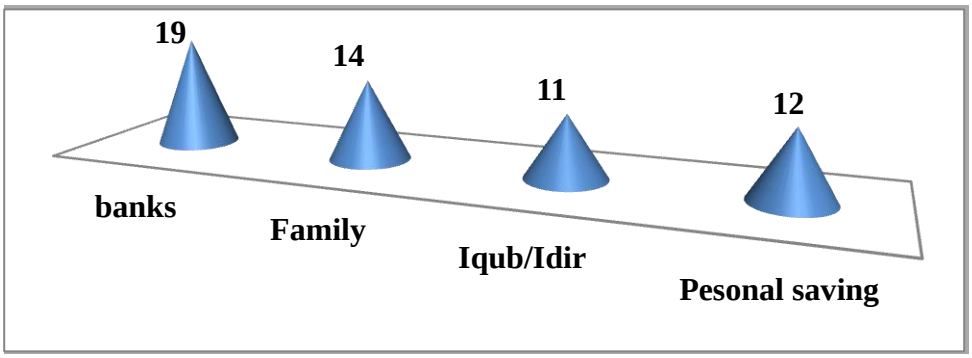

Figure 3. The proportion of startup capital for the SME owner respondents in Ankober Woreda.

3.2. Growth description

The higher rate of growth in terms of the number of labor employment is found to be significantly higher in milling (5.3 times more relative to each previous year) than the other sector and relatively lower ruminant animal fattening sector (1.9) (Table 3). This may be associated to factors like supply-demand in equilibrium in miller and shortage input like animal feed and veterinary health services, access to better infrastructure and market for the thrived animals. Construction sector grew relatively at higher rate (2.8 5.3 times more relative to each previous year) than wood/metal work and other service provision sectors (2.1 times more relative to each previous year).

Table 3. Growth rate of different sectors of enterprises in terms of the numbers of labor employment

Sector of the enterprises	Sum of numbers of employees			Ln (Change in no. of employee)	Average Age of the enterprise	Ln(Average Age of the enterprise)	Growth rate in terms of employment
	initial	current	Change in no. of employee				
construction	17	29	12	2.5	2.5	0.9	2.8
Livestock fattening	74	110	36	3.6	6.7	1.9	1.9
Milling	6	14	8	2.1	1.5	0.4	5.3
others	23	63	40	3.7	6.3	1.8	2.1
Wood and metal work	28	50	22	3.1	4.5	1.5	2.1
Average							2.8

The higher rate of growth in terms of sale turnover is found to be significantly higher in milling (33.8 times more relative to each previous year) than the other sector and relatively lower ruminant animal fattening sector (6.7). This may be associated to factors like supply-demand in equilibrium in miller and shortage input like animal feed and veterinary health services, access to better infrastructure and market for the thrived animals (Table 4). Construction sector grew relatively at higher rate (14.9 times more relative to each previous year).

Table 4. Growth of different sectors of enterprises in terms of sale turnover relative to each previous year

Sector of the enterprises	Annual sale turnover (birr)				Average Age of the firm (years)	Ln (average age of firm)	Growth rate in terms of sale turnover hence total profit
	Annual Average Initially (birr)	Annual Average currently	Difference in sale turnover	Ln(difference)			
construction	807000	1437400	630400	13.4	2.5	0.9	14.9
Livestock fattening	396250	762666.7	366416.7	12.8	6.7	1.9	6.7
Miller house	875000	1625000	750000	13.5	1.5	0.4	33.8
others	952000	1551071	599071	13.3	6.3	1.8	7.4
Wood and metal work	871250	1538571	667321	13.4	4.5	1.5	8.9
Average							14.3

Generally the growth rate of SME in the study area is positive and higher in terms of both of growth measurements with average of 2.8 and 14.3 in labor employment and sale turnover of their product/output respectively. Comparing the SME growth rate between the two scales sale turnover is significantly higher than labor employment. This reveals that an enterprise particularly in the study district, Ankober woreda, doesn't employ more numbers of labors despite their increment in sale of output/total income growth. This may be associated to incompetency of manager/owner in the enterprise/firms. However, assuring employment to absorb high numbers of job seekers, in addition to achieving economic growth was the prime objective of

Ethiopian government to formulate a National SMEs Development and Promotion Strategy in 1997 E.C.

3.3. Total sale growth determinant factors of SMEs

Growth rate of enterprises in terms of total sale of services/products in Ankober Woredas significantly influenced by the combined effects of external factors (Human capital Factor, Managerial competency, financial, infrastructure and marketing factors) (Table 5). The sig. (p-value) shows that explanatory variables Human capital Factor, financial and marketing factors) were statistically affected the total sale growth rate of the firms in the study area with 95 % confidence ($p<0.05$).

Table 5. Effect of external factors for growth of SMEs in terms of year total sale/ turnover

Effect of external factors for growth of MSE in terms of sale/ turnover	Coefficients	t	P-value	95% CI	
				lower	Upper
Constant	1.95	2.51	0.015	0.39	3.5
Human capital factor	-0.06	-3.09	0.003***	-0.11	-0.02
Management competency factor	-0.08	-1.75	0.087*	-0.17	-0.01
Financial factor	-0.30	-2.78	0.008***	-0.51	-0.08
Infrastructural factor	0.04	1.90	0.063*	-0.002	-0.07
Marketing factor	0.12	2.29	0.026**	0.02	0.23

: slightly significant; **: significant; *: Extremely significant*

It is found that the established regression function for the growth of SMEs in terms of total yearly sale/ turnover in relation to external factors as:

$$\boldsymbol{SMEs\ Growth\ (sale) = 1.95 - 0.06\ HCF - 0.08\ MCF - 0.3\ FF + 0.04\ InfrF + 0.12\ MF}$$

The equation reveals that of SMEs in the study area grows 1.95 units each year given that all external variables area ignored and deficient in human capital factor (HCF) brought about 0.06 units decreases on the growth of total sale of SMEs (p-value =0.003). While managerial incompetency and absence of access to finance for the enterprises negatively impacted with 0.08 and 0.3 units, the infrastructure condition positively enhanced 0.04 units total sale growth respectively. Marketing factor promoted for about 0.12 units in the total sale/ turnover growth of the enterprises in Ankober district. This finding reveals incompetent managerial competency of the enterprises (MCF, P= 0.087) and unavailability of adequate infrastructure in the area (InfF, P= 0.063) adversely contributed to total yearly sales growth/profitability growth decrease with statistically significant effect ($p< 0.1$). The growth rate of enterprises in total sale of services/products in Ankober woreda is significantly influenced by the combined effects of general factors (age, size, Managerial competency, financial access, infrastructural access and access to market for the enterprises). These explanatory variables were found significantly to affect the total sale growth rate of the firms in the study area with 95 % confidence ($p<0.05$) (Table 6).

Table 6. Effect of general factors for growth of SMEs in terms of sale/ turnover

Effect of general factors for growth of MSE in terms of sale/ turnover	Coefficients	t	P-value	95% CI	
				lower	upper
Constant	0.56	0.73	0.47	-0.98	2.11
Age of the enterprise	-0.15	-2.08	0.043**	-0.29	-0.05
Size of the enterprise	0.51	3.19	0.003***	0.19	0.84
Managerial competency	-0.21	-2.63	0.012**	-0.38	-0.05

Human capital of enterprise	-0.08	-1.25	0.218	-0.22	0.05
Financial system of enterprises	-0.05	-0.40	0.691	-0.31	0.21
Marketing access	0.01	0.25	0.804	-0.09	0.11
Infrastructure access	-0.21	-2.27	0.027**	-0.38	-0.02

: slightly significant; **: significant; *: Extremely significant*

The established regression function for the growth of SME in terms of sale turnover in relation to general factors was synthesized as

$$\boldsymbol{SMEs\ Growth\ (sale) = 0.56 - 0.15\ age + 0.51size - 0.21management - 0.08human - 0.05finance + 0.01market - 0.21\ infrastructure}.$$

Total sale growth of small and medium enterprises in the study area was increasing by 0.56 units each year leaving all the general factors. As the age of the firm increases by one-year total sale growth of enterprises declines by 0.15 units with statistically significant value of (p= 0.043; [CI= -0.29 to –0.05]) at 5% significance level. The regression output showed negative and statistically significant (p=0.043) relationship between age and growth rate of firms. It is defined as the number of years a firm has been operating in the market (since the date of incorporation) and is expected to have a negative relation with firm growth. Contrary to Gibrat's law Evans, (1987) examined the effects of firm size and age on growth using data on manufacturing firms in the United States. Thus, he suggested that younger firms are more likely to grow faster than older ones. Younger owner/manager has the necessary motivation, energy and commitment to work and is more inclined to take risks (Storey, 2004). Moreover, it was found that in the United Kingdom and United States of America younger SMEs grew more rapidly than older enterprises.

The total sale and profit growth of enterprises reveals that one unit increase in the size of the firm, growth also increases by 0.5 units in the total sale of an enterprises (CI= 0.19 to 0.84) at 5% significance level. From empirical works, it is understood that the larger the firm (defined in terms of assets) the greater it's potential to grow (Wiklund and Shepherd, 2005). In addition, (Mateev and Anastasov, 2010) supported that firm size when proxy by its total assets tends to increase sales revenues. However, size as determinants of firm growth has been discussed for a long time, following the formulation of Gibrat's law in 1931.Gibrat's law states that the rate of growth of a firm is independent from its size at the beginning of the period, and that the probability of a given growth rate during a specific time interval is the same for any firm within the same industry. General pattern of growth in terms of size is smaller firms grow more rapidly than large firms (Storey, 2004; Delmar, 2003).

Managerial incompetency with low level of education, absence of working experience & managerial experience and business education of the enterprises owners/leaders has negatively impacted on the total sale growth/yearly profit of enterprises by 0.21 units. This finding is inconsistent with other studies done by (Storey, 2004) showing business owners who previously owned other businesses may be inherently more cautious than those unburdened by such experience and may therefore not have a growth objective. Absence of proportional human capital in enterprise negatively affected total sale growth of the firms and this is in agreement with Ucbasaran *et al.,* (2008) conclusion stating that educated entrepreneurs play an important role in identifying and exploiting opportunities. According to Chandler and Hanks, (1998), increased levels of human capital can act as a substitute for financial capital. Educated entrepreneurs are particularly successful when they own the firm in question.

The econometric result of this study also reveals that short supply or non-existence infrastructures like water, electric system, transport, telecommunication system and sanitation services brought about significantly negative impact to total sale/profit growth of SMEs in the study area. This is because most of them are located in areas where public services and economic infrastructure are in adequate so that they face a higher cost to get services than those upper-

income neighborhoods. This result is inconsistent with other similar study conducted in silte zone of Ethiopia where infrastructure found to be the determinant factor affecting the growth of service operating and construction sector (Muhaba, 2022).

3.4. Employee number growth determinant factors of SMEs

Growth rate of enterprises in total number of worker employment in Ankober district is not significantly influenced by the combined effects of business environment (Human capital Factor, Managerial competency, financial, infrastructure and marketing factors) (Table 7). The researcher found the established regression function for the growth of SMEs in terms of worker employment in relation to external factors as

$$\boldsymbol{SMEs\ Growth\ (no\ of\ employee)} = \mathbf{0.29 - 0.025\ HCF - 0.05\ MCF - 0.14\ FF + 0.01\ InfrF + 0.08\ MF}$$

This reveals SME in the study area grows 0.29 units each year given that all external variables (business environment) are ignored and deficient in human capital factor (HCF) brought about 0.025 units decreases on the growth of labor employment of SME (p-value =0.096).

Table 7. Effect of general factors for growth of MSE in terms of worker employment

Effect of external factors for growth of SMEs in terms of no. of employees	Coefficients	T	P-value	95% CI	
				lower	upper
Constant	0.29	0.53	0.601	-0.83	1.41
Human capital factor	-0.025	-1.70	0.096*	-0.05	0.005
Management competency factor	-0.05	-1.47	0.147	-0.11	0.02
Financial factor	-0.14	-1.81	0.077*	-0.29	0.02
Infrastructural factor	0.01	0.42	0.679	-0.02	0.03
Marketing factor	0.08	2.00	0.051*	-0.001	0.16

: slightly significant; **: significant; *: Extremely significant*

Managerial incompetency like financial management, personnel management, marketing management and general administration and inadequate access to external source of finance for the enterprises negatively impacted with 0.05 and 0.14 units. This result is in agreement with other studies done by Mashemene (2015) and Anderson (2017) whose finding reveals Poor access to debt finance, lack of collateral, bureaucratic loan procedures, business informality, poor repayment habits and a lack of technical and management skills highly constrained the growth of small and medium enterprises in Tanzania. The result also shows that there is no market competition and problem to negatively constrain SMEs growth in the area (Table 6). Meaning that given no other constraining factors and produce to their maximum capacity, they can sell the product without customer competition so as to increase their profit as well as hire more employees.

Growth rate of enterprises in employing increased numbers of workers in Ankober district is significantly influenced by the combined effects of general factors (age, size, Managerial competency, financial access, infrastructural access and access to market for the enterprises) (Table 8).

Table 8. Effect of general factors for growth of SME in terms of worker employment

Effect of general factors for growth of SMEs in terms of no. of employee	Coefficients	T	P-value	95% CI	
				lower	upper
Constant	-0.71	-1.40	0.167	-1.74	0.31
Age of the enterprise	-0.21	-4.51	0.000***	-0.303	-0.12
Size of the enterprise	0.48	4.47	0.000***	0.26	0.69

Management competency	-0.16	-2.98	0.004***	-0.27	-0.05
Human capital of enterprise	0.05	1.15	0.255	-0.04	0.14
Financial system of enterprises	-0.03	-0.34	0.737	-0.20	0.14
Marketing access	0.05	1.60	0.116	-0.01	0.12
Infrastructure access	-0.001	-0.01	0.992	-0.12	0.12

: slightly significant; **: significant; *: Extremely significant*

These reveal general explanatory variables including enterprises size, managerial competency and access for infrastructure were statistically affected the labor employment growth rate of the firms in the study area. The researcher found the established regression function for the growth of SMEs in terms of worker employment in relation to general factors as

$$\begin{aligned} \boldsymbol{SMEs\ Growth\ (no\ of\ employee)} &= \mathbf{-0.71 - 0.21\ age} \\ &\mathbf{+ 0.48\ size} \\ &\mathbf{- 0.16\ management} \\ &\mathbf{+\ 0.05\ human - 0.03 finance} \\ &\mathbf{+ 0.05\ market} \\ &\mathbf{- 0.001\ infrastructure} \end{aligned}$$

Employing additional numbers of employees in small and micro enterprises in the study area decreased by 0.71 units each year leaving all the general factors. As the age of the firm increases by one year labor employing growth of enterprises was declined by 0.21 units with statistically significant value of (p= 0.000; [CI= -0.303 to -0.12]) at 5% significance level.

Regression output showed negative and statistically significant (p=0.000) relationship between age and growth rate of firms. As age of firms' increases, they have been operating very low leading to suggesting stunted growth rate. Unlike firm age, firm size of enterprises found to be significantly (p= 0.000) and positively impacted their growth rate by 0.48 in the study area. Managerial incompetency of the enterprises has got negative impact on the labor employment growth of enterprises declined by 0.16 units with statistically significant value of (p= 0.004; [CI= -0.27 to -0.05]) at 5% significance level.

Regression output of this study reveals negative and statistically significant (p=0.004) relationship between managerial competence and growth of enterprises. Despite firm managers were incompetent, hiring of additional labor by the enterprises in the study area found to grow by 2.8 (Table 7). Unlike to this finding, studies done by (Storey, 2004) showed business owners who previously owned other businesses may be inherently more cautious than those unburdened by such experience and may therefore not have a growth objective.

Absence of adequate infrastructure in the study area brought about 0.001 unit decline in labor employment growth of small and medium enterprises with statistically insignificant value of p (>0.05) at 5% significance level. Regression output showed negative but statistically insignificant (p> 0.05) relationship between access to adequate infrastructure and growth of enterprises. Despite inadequacy of infrastructure, the overall sale of the enterprises in the study area found to grow by 2.8 (Table 7) this may be associated to smaller sample size or sampling error. Therefore, it needs further investigation to get unequivocal evidence.

4. Conclusion and Recommendation

Small-scale and Micro enterprises are the integral parts of industrial development and considered as the cornerstones of a vibrant entrepreneurial economy and social transformation. Thus, play key roles in ensuring economic growth and reduce poverty especially in developing countries. However, their growth can be constrained by both firm specific factors including size, age, human capital and managerial competence, and business environment factor which include access to finance, access to market, and infrastructure. Growth of SMEs in terms of labor employment in Ankober woreda, until the study in April 2023 reveals in a good progress, especially the milling sector being relatively faster than others. Growth in total asset accumulation/sale turnover and yearly profit of SMEs is in a logarithmic progress the milling sector being the wealthiest and ruminant animal fattening relatively poorest track.

The study concludes that size of the enterprises and access to market enhance SMEs total annual sale/profit, other factors like age of the enterprises, human capital, managerial competency, access to finance and infrastructure condition are found to negatively constrain their growth. Econometric analysis also reveals that SMEs growth by numbers of employee's measures of performance found to adversely distress by longer age enterprises, size of the firm and poor managerial competency of owners/managers of SMEs. This suggests small and medium enterprises development and extension bureau in Ankober woreda are expected to transform older and recruit the newer, link them with lending financial institutions and provision of technical and entrepreneurship skills training by respective local TVET college and Debre Berhan University experts. Endorsement of compulsory national bank policies in supporting SMEs to force banks' lending priority toward SMEs is also highly recommended. Meanwhile further investigation should be kept to get unequivocal evidence on other contributing factors influencing the growth of SMEs in Ankober and neighboring woredas.

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