

Kassa, Erstu Tarko

Article

Socioeconomic determinants of micro and small enterprise growth in North Wollo and Waghimira Zone selected towns

Journal of Innovation and Entrepreneurship

Provided in Cooperation with:

Springer Nature

Suggested Citation: Kassa, Erstu Tarko (2021) : Socioeconomic determinants of micro and small enterprise growth in North Wollo and Waghimira Zone selected towns, Journal of Innovation and Entrepreneurship, ISSN 2192-5372, Springer, Heidelberg, Vol. 10, Iss. 1, pp. 1-14,
<https://doi.org/10.1186/s13731-021-00165-5>

This Version is available at:

<https://hdl.handle.net/10419/259643>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

RESEARCH

Open Access



Socioeconomic determinants of micro and small enterprise growth in North Wollo and Waghimira Zone selected towns

Erstu Tarko Kassa

Correspondence: erstu0910@gmail.com
Woldia University, Woldia, Amhara,
Ethiopia

Abstract

This study aims to investigate the socioeconomic determinant factors that affect the growth of micro and small enterprises (MSEs) in North Wollo and Waghimira Zone selected towns. In this study, a cross-sectional research design with both descriptive and explanatory research design has been employed, and 303 owners of enterprises have participated. The towns were selected purposely, and the respondents were also selected by using a simple random sampling technique. The data were analyzed by using STATA v-14 and applied descriptive and binary logistic regression analysis (odds ratio). The finding of the study revealed that age of the owner, access to finance, family business background, and interest rate most likely affect the growth of the enterprises with the statistically significant level. On the contrary, entrepreneurship training, the experience of the owner, the inflation rate, and competition less likely affect the growth of the enterprises with a statistical significant level. The remaining factors such as gender of the owners, education background, business age, business type, business location, social responsibility, tax rate, and social attitude were not statistically significant to determine the growth of MSEs.

Keywords: Socioeconomic, Growth, Micro and small enterprises, Profit

Introduction

Micro and small enterprises (MSEs) are the best solutions for the country's gross domestic development, reduction of unemployment, and creating smooth economic environments. In fast-growing countries, MSEs create more jobs for young graduates, because these enterprises do not require, space/size, training, capital, and sophisticated technologies (Saleem, 2017). In South Africa, the enterprises became a bounce of economic growth and expansions and contribute 50% of employment opportunity and the gross domestic product of other African countries (Kamunge et al., 2014). In Romania, these enterprises comprise 50% by adding value to the economy of the country (Cicea et al., 2019). The governments incorporate the issues of micro and small enterprises in their policies to get more shares for their country's economy. According to the World



© The Author(s). 2021 **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

Bank report (2014), micro and small enterprises played a significant role by alleviating poverty in developing countries especially in Egypt (Ndege & Park, 2015).

The government of Ethiopia gives more emphasis for the enterprises to generate income, to create job opportunities, to generate foreign currency, to transfer technologies, and to transfer micro and small enterprises to medium-sized enterprises. In 1997, national micro- and small-scale enterprise strategy was formulated by the government to support the enterprises. This strategy is helpful to have a legal framework, institutionalize, and create supportive environments (Degefu, 2018). In Ethiopia, these enterprises absorbed more manpower in the system, need less startup cost, and produce inputs or raw materials for large industries (Saleem, 2017). However, the growth of micro and small enterprises are exposed to different challenges in Ethiopia such as lack of access to markets, finance, low ability to acquire skills and managerial expertise, high mortality rate, low access to appropriate technology, bureaucratic and administrative challenges, lack of entrepreneurial skills, and poor access to quality business infrastructure. These challenges also become similar in Cape coasts and other countries (Abebaw et al., 2018; Gbadeyan et al., 2017; Ndege & Park, 2015).

A scholar argued that micro and small enterprises' mortality rate (three MSEs out of five have failed within the first few months) is high due to strong competition with large companies and the absence of subsidies by the government (Kamunge et al., 2014).

A scholar argued that micro and small enterprises' mortality rate (three MSEs out of five have failed within the first few months) is high due to strong competition with large companies and the absence of subsidies by the government (Kamunge et al., 2014).

The researcher tried to look at prior studies in Ethiopia and those published in different journals. The studies were focused on factors (internal and external) that affect the enterprise's growth and continuity in general (Cherkos et al., 2018; Assefa & Cheru, 2018; Gutu & Yali, 2020). To investigate the capital performance of enterprises, Mamo's (2020) study result indicates that access to credit and training provision had a positive contribution to capital accumulation. According to Tekola and Gidey's (2019) finding, numerous factors affect the growth of MSEs such as sustainability, lack of credit, weak market linkage, insufficient training, weak human resources development schemes, dependency on government and spoon-feeding mentality, oscillations in government policies, price variations, weak links, and poor market and product development strategies. The other study result is done by Wolde and Geta (2015) and other researchers; previous work experience, an enterprise engaged in manufacturing, market access, access to working and selling premises, amount of initial capital, access to finance, social networks, financial problems, lack of managerial and entrepreneurial skills, workplace and marketing problems, the inadequacy of infrastructural facilities, and vertical linkage are factors that affected the growth of MSEs (Gebremariam, 2017; Leza et al., 2016). However, the researcher was unable to find studies conducted in the study area especially in the Mersa, Woldia, and Sekota towns. The other reason which also motivated the researcher to undertake this study is that exploring the social and economic factors is the most important way to facilitate the growth of MSEs in the study area. Hence, this study gives

more emphasis to investigate which socioeconomic factor highly affects the growth of micro and small enterprises in the study area. Based on the question, the objective of the study becomes: to examine the socioeconomic determinants of micro and small enterprise growth.

Review of related literature

Definition of micro and small enterprises

There is no universally agreed definition about the micro and small enterprises. Scholars defined micro and small enterprises based on their respective countries’ situation. According to Ardjouman and Asma (2015), SME has no standard definition. SMEs have been identified differently by various individuals and organizations, such that an enterprise that is considered small and medium in one country is viewed differently in another country. In Ethiopia, the criteria to define whether the enterprise is micro and small are presented in Table 1.

Determinants of micro and small enterprise growth

Gender of owner

In the Ethiopian context, being male and female has a significant effect on the success of the enterprises. Women are overburdened when they became housewives by caring for the children, cooking the meals, and managing the family allotted for her; when they are free from the above cultural problem, they are smart enough to be risk-takers and hard workers, enhancing the saving of the business and increasing welfare of the business (Alemu & Dame, 2017). When business owners are female, sales volume increases, but not profitability (Prijadi & Desiana, 2017). On the contrary, gender has a positive influence on the overall success and growth of micro and small enterprises (Aworemi et al., 2010).

Age

Previous study results indicate that young entrepreneurs are courageous and risk-takers to start a business than the old people. The old people may be engaged in different responsibilities, and they may reject the activities of their business. As cited by Yonis et al. (2018), there is a negative relationship between the performances of MSEs with the age of the owners. The young owners become successful than the old ones (Nejati et al., 2014). The old owners are unable to cover the mortgage payment of the enterprise (Alemu & Dame, 2017). The other study finding indicates that age has a positive influence on micro and small enterprise growth (Aworemi et al., 2010).

Table 1 Classifications of micro and small enterprises

| Enterprise size | Sector | An asset in birr | Number of workers |
|-----------------|----------|------------------|-----------------------------|
| Micro | Service | ≤ 50,000 birr | Not more than 5 individuals |
| | Industry | ≤ 100,000 | |
| Small | Service | ≤ 500,000 birr | 6–30 individuals |
| | Industry | ≤ 1.5million | |

Source: MSEs’ development support scheme and Implementation strategies FDRE

Education background

Education is a means to change the behavior of humankind. The MSE owners are well educated; they can manage the enterprises properly and can predict the risks that will happen. Education matters for the survival of the enterprises (Solomon, 2004; Yonis et al., 2018). As cited by Afande (2015), education is the factor that positively affects the growth of the firms (King & McGrath, 2002). Educated business owners can allocate scarce resources, maximize the profit of the enterprises, and has the trust of the creditors to access a loan (Alemu & Dame, 2017). In general, education has a positive influence on micro and small enterprise growth (Aworemi et al., 2010; Meresa, 2018).

Access to finance

Financial access is the base for the success of microenterprises' growth and sustainability. The financial provision must be incurred at a reasonable cost (interest rate). The government of Ethiopia tries to provide credit for young enterprises and creative entrepreneurs. The service provided is based on the requirements of start-up, growing, and matured micro and small enterprises (Mulugeta & Getaendale, 2017). Access to finance creates a strong competition to implement technologies, skills, and innovation (Kamunge et al., 2014). To access loan from credit institutions, collateral obligation, amount of money, and the high-interest rate are challenging for young entrepreneurs (Meres, 2018).

Experience of the owner and age of the business

An experienced owner can be a successful business owner by predicting the future risks and by using the prior best practices. Experience is better than a certificate (degree) to run the activities properly. The management practices such as planning, control, organizing skills, and proper staffing are implemented by the experienced business owner (Kamunge et al., 2014).

The experience of the owner/manager can have a significant effect on the success of a business venture in terms of both the survival and growth of the business (Alemu & Dame, 2017; Meresa, 2018; Saleem, 2017).

Regarding the age of business, when the business becomes older, the price will decline, and acceptance from the customers diminishes from time to time. But the owner applies innovative ideas that can save the old enterprise from devastating risks (Afande, 2015). According to the prior studies, result from the age of the firm has a negative influence on the profitability of the enterprises (Alemu & Dame, 2017; Margaretha & Supartika, 2016).

Types of business

In the Ethiopian context for a few businesses, types are given a priority for young entrepreneurs to start a business such as manufacturing, construction, urban agriculture, etc. Young entrepreneurs before deciding to engage in the micro and small business should be aware of how to select the business or their interest. During business selection, the entrepreneur is better to use different techniques to identify the right business type at macro and micro levels. The business type has a determinant effect on the success of the enterprises. The owner should consider the

competition, credit access, and other factors that lead the business into growth or profitability (Alemu & Dame, 2017). The owners can be systematic by diversifying the types of products and the business, too.

Business area/operation location

The location of the micro and small enterprise can be a major factor for the overall success of the business. When the operation area of MSEs is near the main road, they can display easily the products for the consumers and increase sales volume; the reverse is true for enterprises not near the main road. Location is crucial for the success or survival of the business (Giday, 2017). The enterprise's location, if there is proximity to banks and micro and financial institutions, the credit access may be simple, and if nearby universities, hotels, government offices, and bus stations, the growth of the enterprises will be more effective (Mersha & Ayenew, 2017a, b).

Family business background

Family is a base for youth success and failure. The background of the family paves the way for the young entrepreneur's success to select and to be profitable. In an experienced family operating a business, their youngsters tend to create a new business, and they develop experience on how to operate the business. Empirical pieces of evidence suggest that entrepreneurial family background is important to identify solutions for challenges and indicating how to survive the business (Alemayehu & Gecho, 2016; Alemu & Dame, 2017).

Entrepreneurship training

Long- and short-term trainings are helpful to enhance the skills of the new entrepreneurs and to manage their future business. To operate new technologies, show business opportunities, know new ways or methods, and identify the treats, entrepreneurship training is compulsory. As far as the training quality is maintained, the marketing skill training is also the best mechanism to communicate with the customers of the product produced by the newly established and existing enterprises (Kebede & Simesh, 2015; Meresa, 2018).

Social attitude

As cited by Maziku et al. (2014), attitudes help to identify whether the situation is favorable or unfavorable, evaluate cognitively, and understand emotional feelings and action tendencies regarding objects, people, or events. They mimic how an individual senses about a bit. To change the mindset of customers, the entrepreneur uses different techniques such as bazaars, exhibitions, and other promotional activities. After creating a good image on the mind of the customers, the owners should take different care to maintain the legacy of the product on the minds of consumers. As much as possible, creating a good reputation is mandatory to have good attitude from the customers of the enterprises. In general, social attitude towards the enterprise owner has an impact on the performance of MSEs (Giday, 2017).

Social responsibility

Corporate social responsibility is a new concept and becomes acceptable by business societies, organizations, and other entities. The organizations are responsible for providing different services for the community such as supporting vulnerable population groups, protecting the environment, and providing different services. The micro and small enterprises are responsible for their respected society during their operation. Social responsibility and small and microenterprises have a positive relationship (Mandl & Dorr, 2007). Corporate social responsibility has its impact on the attractiveness of SMEs; few theoretical and empirical contributions could be found (Tur-yakira et al., 2014).

Tax rate

High tax rates decrease firms' internal sources of finance. The high tax rate becomes a cost for the enterprises. With the tax levied by the government by guess or by asking the owners of daily income, the officer will project the amount of tax that will be paid by the enterprise owner. During projection of the tax, the amount of tax becomes high for the microenterprises and has an impact on the performance of the micro and small enterprises. Study indicates that in Algeria, SMEs experience heavy tax rates that discourage them from expanding their operations (Bouazza et al., 2015). The tax policy of the countries affects the overall performance of micro and small enterprises (Tee et al., 2016). In general, the tax rate hurts the growth of micro and small enterprises.

Inflation rate

In the Ethiopian context, the double-digit inflation rate affects the growth of micro and small enterprises. Due to inflation, workplace rent increased and the purchasing power of citizens diminished; this may affect the growth of the micro and small enterprises. The small-scale manufacturer's input price may rise, and they may be affected by raising the inflation rate (Meresa, 2018).

Interest rate

It is known that with a reasonable interest rate, providing a credit service plays a significant role in the success of micro and small enterprises. The interest rate and success of the creditors have a direct relationship. The cost of credit facilities should be reviewed downwards to enable smooth repayment and increase in the demand for loans by SMEs to enable them to grow their businesses which will have a ripple effect in the economy (Bawuah et al., 2014; Onakoya et al., 2013).

Competition

As cited by Sitharam and Hoque (2016), businesses have to make decisions that deal not only with business survival opportunities but also with business development in a changing environment under dynamic competitive conditions, where each competitor tries to do impossible things to survive. Over the years, competition among SMEs has increased radically. Competition and sustainability for SMEs involve factors such as changing market trends, changing technologies, and emerging new management and

organizational techniques. SME survival is increasingly dependent on several factors including the resilience of SMEs to refocus some of their strategies (Gunasekaran et al., 2011).

Materials and methods

In this study, cross-sectional research design with both descriptive research and explanatory research designs was employed, and quantitative approach was followed to analyze the quantitative data. The target population in the purposely selected town were 3291 micro and small enterprises. From each city, the researcher was applied a simple random sampling technique to select respondents. To identify the target participants or sample size in this study, the researcher used Yamane's (1967) formula. Hence, the formula is described as follows:

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

where, N = target population, n = sample size, e = error term

$$n = \frac{3291}{1 + 3291(0.05)^2}$$

$n = 357$

Based on the sample size, the respondents have participated proportionally from each town as shown in Table 2.

Variables and measurement of the study

In this study, sixteen independent variables have been incorporated. The variables were measured based on Table 3.

Data analysis and model specifications

After data verification was conducted, the collected data were analyzed by using descriptive statistics and binary logistic regression analysis. Regarding the model specification, the binary logistic model has been selected. The dependent variable of the study is “growth of MSEs” and “not.” Hence, it is coded as the value 0 for “growing” and 1 for “not.” The model is selected for analysis because the dependent variable has a dichotomous scale. The data was analyzed by using STATA v-14.

The mathematical formula by Gujarati and Porter (2009) is described as follows:

Table 2 Sample size of the study

| Town | Target population | Sample size (proportional) |
|--------|-------------------|----------------------------|
| Mersa | 1530 | 166 |
| Sekota | 871 | 94 |
| Woldia | 890 | 97 |
| Total | 3291 | 357 |

Source: Respective town technique and vocational development offices (2020)

Table 3 Variables and measurements of the study variables

| Variables | Symbol | Measurement |
|------------------------------------|---------|--|
| Gender (sex) | Sx | 0 = male, 1 = female |
| Age of the owner | AgOw | 0 = < 30, 1 = ≥ 30 years |
| Education background of the owner | EduBaOw | 0 = 12 and below, 1 = diploma, 2 = degree and above |
| Access of finance | AccFi | 0 = credit institution, 1 = own |
| Age of the business | BuAge | 0 = below 5 years, 1 = 5 years and above |
| Types of business owner engaged in | BusTy | 0 = manufacturing, 1 = trade, 2 = service, 3 = construction, 4 = urban agriculture |
| Family business background | FamBuBa | 0 = yes, 1 = no |
| Experience of the owner | Exp | 0 = yes, 1 = no |
| Business location | BuLo | 0 = near main road, 1 = not |
| Entrepreneurship trainings | EntTr | 0 = yes, 1 = no |
| Social responsibility | SoRe | 0 = yes, 1 = no |
| Social attitude | SoAtt | 5-point Likert scale |
| Tax rate | TaRa | 0 = high, 1 = low |
| Inflation rate | InflRa | 0 = high, 1 = low |
| Interest rate | IntRa | 0 = high, 1 = low |
| Competition | Compt | 0 = high, 1 = low |
| Growth of MSEs | Grth | 0 = growing, 1 = not growing |

$$P_i = \frac{e^{Z_i}}{1 + e^{Z_i}}, \tag{2}$$

where P_i is the probability of participation for the i th respondent, and it ranges from 0 to 1; Z_i is a function of n-explanatory variables which is also expressed as

$$P_i = \beta_0 + \beta X_i + U_i \tag{3}$$

$i = 1, 2, 3, \dots, n$

β_0 =intercept, β_1 =logit parameter, U_i =a disturbance, X_i =respondents' characteristics, and P_i =respondents' participation

The probability that an individual is

$$1 - P_i = \frac{1}{1 + e^{Z_i}}. \tag{4}$$

Therefore, the odds ratio can be written as

$$\frac{P_i}{1 + P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}}. \tag{5}$$

Now, $\frac{P_i}{1+P_i}$ is simply the odds ratio in favor of growth of MSEs. It is the ratio of the probability that the enterprises would grow to the probability that the enterprises would not grow.

Finally, by taking the natural log of Eq. (2), we obtain

$$L_i = \ln \left(\frac{P_i}{1 - P_i} \right) = Z_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n, \tag{6}$$

where β_0 = an intercept, β_1, β_2 = slopes, X_i = variables

Therefore, the final model is described as follows:

$$\begin{aligned} \text{Logit (Y)} = & \beta_0 + \beta_1\text{Gen} + \beta_2\text{AgOw} + \beta_3\text{EduBaOw} + \beta_4\text{AccFi} + \beta_5\text{BusAge} \\ & + \beta_6\text{BusTy} + \beta_7\text{FamBuBa} + \beta_8\text{Exp} + \beta_9\text{BuLo} + \beta_{10}\text{EntTr} + \beta_{11}\text{SoRe} \\ & + \beta_{12}\text{SoAt} + \beta_{13}\text{TaRa} + \beta_{14}\text{InflRa} + \beta_{15}\text{IntRa} + \beta_{16}\text{Compt}, \end{aligned}$$

where, Gen(sx) = gender, AgOw = age of the owner, EduBaOw = education background of the owners, AccFi = access of finance, BusAge = business age, BusTy = business type, FamBuBa = family business background, Exp = experience, BuLo = business location, EntTr = entrepreneurship training, Fambuba = family business background, SoRe = social responsibility, SoAt = social attitude, TaRa = tax rate, InflRa = inflation rate, IntRa = interest rate, and Compt = competition.

Results and findings

Response rate

From a total of 357 respondents, the 303 respondents' data were analyzed in this study. However, from the remaining 54 respondents, 20 respondents' data were disqualified due to incompleteness, and 34 dispatched questionnaires were not returned.

Descriptive statistic results

This section briefly elaborates on the characteristics of respondents such as sex, age, level of education, and the types of business the owners engaged in. As indicated in Table 4, 29.4% of the total respondents were male, while the remaining 70.6% were female. The age profile has been also presented in the table. From the total respondents, 15.2% were < 30 years and the remaining also ≥ 30 years. Regarding education level, 86.8% were 12 and below, while the remaining were diploma graduates. Regarding business type engagement, of the total respondents, 46.9% were engaged in trade sectors, 32.7% participated in service sectors, 14.5% of respondents were engaged in

Table 4 Descriptive statistics of the study variables

| | | Frequency | Percent | Valid percent |
|--------------------|-------------------|-----------|---------|---------------|
| Gender | Male | 89 | 29.4 | 29.4 |
| | Female | 214 | 70.6 | 70.6 |
| | Total | 303 | 100.0 | 100.0 |
| Age | < 30 | 46 | 15.2 | 15.2 |
| | ≥ 30 | 257 | 84.8 | 84.8 |
| | Total | 303 | 100.0 | 100.0 |
| Level of education | 12 and below | 263 | 86.8 | 86.8 |
| | Diploma | 40 | 13.2 | 13.2 |
| | Total | 303 | 100.0 | 100.0 |
| Business type | Trade | 142 | 46.9 | 46.9 |
| | Service | 99 | 32.7 | 32.7 |
| | Manufacturing | 44 | 14.5 | 14.5 |
| | Construction | 11 | 3.6 | 3.6 |
| | Urban agriculture | 7 | 2.3 | 2.3 |
| | Total | 303 | 100.0 | 100.0 |

Source: Own survey (2020)

manufacturing, 3.6% also engaged in construction, and the remaining 2.3% of the respondents have participated in the urban agriculture sector.

Model diagnosis test of the study

The study logistic model for goodness-of-fit test result showed that in Table 6, the model is appropriate for further analysis at $p < 0.01$. Regarding the information criteria, the value of AIC is lower than BIC, the model is correctly described and appropriate. The other model test was undertaken by the researcher is that link test. This test helps to test specifications of the dependent variable of the study; it is interpreted as a test, conditional on the specification. Since the hat is significant ($p < 0.01$) and the hat square has no explanatory power (because $p > 0.05$), the model is correctly specified. The ROC curve analysis result indicates that positive and the observations were incorporated in the study model.

Regarding the classification, Table 5 shows that the model predicts the membership of the group. The model correctly classified 77.4% of cases of growing and 75.7% of not-growing MSEs. Thus, the overall accuracy of classification weighted average of these two values was 76.6% of cases; this may be seen as the model that fulfills the goodness of fit.

Discussions

Socioeconomic determinants of micro and small enterprise growth in the North Wollo and Waghimira Zone

The detailed discussion of the logistic regression results (odds ratio) of the study variables based on Table 6 is discussed as follows:

The age-related factors were considered in this study. The micro and small enterprise owners below the age of 30 are exceeded by the MSE owners above 30 years by 8.739 in terms of the growth of SMEs. This result assured that the youngest owners’ enterprises were more successful than the other group. This finding is consistent with the finding of Yonis et al. (2018), but contradicts with the result of Aworemi et al. (2010). Therefore, the age of the owners was able to predict the growth of MSEs.

The sources of finance can be from credit institutions, banks, families, friends, and their own sources. The finance-related factors can determine the growth of micro and small enterprises to operate continuously and achieving the growth of the enterprises. The study logistic result revealed that access to finance-related factors also indicated odds ratio (B) = 13.475 (95% CI = 6.305 to 28.798), which means that the enterprises can be improved by 13.475 times, when the owners accessed credit from financial

Table 5 Classification table

| Observed | | Predicted | | Percentage correct |
|--------------------|-------------|-----------|-------------|--------------------|
| | | Growing | Not growing | |
| Growing | Growing | 120 | 35 | 77.4 |
| | Not growing | 36 | 112 | 75.7 |
| Overall percentage | | | | 76.6 |

Source: Own survey (2020)

Table 6 Logistic regression results for the growth of MSEs

| Grth | Coef. | St.Err. | t value | p value | 95% Conf interval | | Sig |
|--------------------|---------|---------|-------------------------|---------|-------------------|--------|-----|
| Sx | 1.689 | .706 | 1.25 | .210 | .745 | 3.83 | |
| Agow | 8.739 | 4.497 | 4.21 | .000 | 3.188 | 23.959 | *** |
| Edubaow | 1.793 | .816 | 1.28 | .199 | .735 | 4.375 | |
| Accfi | 13.475 | 5.221 | 6.71 | .000 | 6.305 | 28.798 | *** |
| buage | 1.09 | .335 | 0.28 | .778 | .598 | 1.989 | |
| busty | 1.555 | .503 | 1.36 | .173 | .825 | 2.932 | |
| fambuba | 4.446 | 2.117 | 3.13 | .002 | 1.748 | 11.305 | *** |
| bulo | .726 | .448 | - 0.52 | .605 | .217 | 2.436 | |
| enttr | .069 | .05 | - 3.69 | .000 | .017 | .285 | *** |
| exp | .29 | .155 | - 2.32 | .021 | .102 | .827 | ** |
| sores | 1.258 | .386 | 0.75 | .454 | .69 | 2.294 | |
| taxra | 1.259 | .42 | 0.69 | .491 | .654 | 2.421 | |
| inflra | .52 | .162 | - 2.10 | .036 | .282 | .957 | ** |
| intra | 2.853 | 1.237 | 2.42 | .016 | 1.22 | 6.676 | ** |
| compt | .406 | .13 | - 2.82 | .005 | .217 | .76 | *** |
| soatt | 1.233 | .225 | 1.15 | .252 | .862 | 1.762 | |
| Constant | .021 | .024 | - 3.28 | .001 | .002 | .21 | *** |
| Mean dependent var | 0.488 | | SD dependent var | 0.501 | | | |
| Pseudo r-squared | 0.320 | | Number of obs | 303.000 | | | |
| Chi-square | 134.371 | | Prob > chi ² | 0.000 | | | |
| Akaike crit. (AIC) | 319.514 | | Bayesian crit. (BIC) | 382.647 | | | |

*** $p < .01$, ** $p < .05$, * $p < .1$

Source: Own survey (2020)

institutions. It is known that without financial resources, the success and growth of the enterprises will not be achieved easily by the business owners. This result is consistent with the findings of Kamunge et al., (2014) and Meresa (2018). Therefore, avoiding obstacles that hinder access for the MSEs’ owner plays a crucial role in sustainable growth.

Experience-related factors can affect enterprise growth positively and negatively. Experience can be a means for the success and failure of the business. The study logistic result of the owner’s experience is odds ratio (B) = . 0.290, 95% = CI .102 to .827; this result indicates that the growth of enterprises can be decreased 0.290 times as far as the owner not experienced to operate the business. Hence, this study result is the same as the findings of Alemu and Dame (2017), Saleem (2017), and Meresa (2018).

When the owners’ family became experienced or has a business operation background, their daughters and boys may become successful, because they can share how to operate the business properly, and they know how to do the reverse when risks happen in their business. The study logistic result confirmed that the owners’ family business became business operators in the prior time the growth of their MSE surpasses by 4.446 times. To compare and contrast this finding with the previous result, this result can be evidence that family business background is meant to survive the enterprises and helps to achieve the profitability of the MSEs’ Alemu and Dame (2017). Thus, the result of this variable becomes consistent with the abovementioned author’s results. To

conclude, the family background is a base for the growth of the MSE owners in this competitive world.

Entrepreneurship training-related factor logistic regression result revealed that $\exp(B) = 0.069$, 95% = CI .007 to .285; that affects the growth of enterprise by decreasing 0.069 times. The growth of MSEs is less likely affected by the entrepreneurship training-related factors in the study area. This result is similar to the researches done by Mulugeta and Getaendale (2017) and Meresa (2018) in the prior time. To summarize, the quality training is interesting for owners that may help them enhance the overall performance and the growth of MSEs, and the reverse is true when the owner could not access entrepreneurial training by concerned bodies.

Factors that arise from high inflation rate-related factors affect negatively the growth of MSEs by .520 times. This factor is a challenge for small enterprises because they may be unable to accumulate inventory to speculate price, and the owners may face additional expenses such as rent, the meal of workers, and other related costs when inflation happens (Meres, 2018).

The other factor considered in this study is the interest rate. The logistic regression result revealed that interest rate-related factors affect the growth of micro and small enterprises by odds ratio $(B) = 2.853$, 95% = CI 1.220 to 6.676, which means that the growth of enterprise can be improved 2.853 times. This result is consistent with the Ndege and Park (2015) and Alen and Bhero (2017) findings. The interest rate becomes reasonable for the creditors to achieve consistent growth for their enterprises. The interest rate should not be a cost for creditors especially for the small-scale micro and small enterprise owners.

Competition among the enterprises may not be a big deal for the success and growth of the MSEs. However, when there is unfair competition between MSEs and companies, the giant will swallow the small enterprises. The study logistic regression result confirmed that high competition affected the growth by 0.406 times to less the continuous improvement of the enterprises.

The remaining variables sex, education background of the owners, business age, business type, business location, social responsibility, tax rate, and social attitude have not been statistically significant to affect the growth of MSEs.

Conclusions

Based on the discussions, the conclusions of the study have been drawn as follows. From the variables, the study age of the owner, access to finance, family business background, and interest rate most likely affect the growth of the enterprises with a statistically significant level. On the contrary, entrepreneurship training, the experience of the owner, inflation rate, and competition less likely affect the growth of the enterprises with a statistically significant level. The remaining variables such as gender of the owners, education background of the owners, business age, business type, business location, social responsibility, tax rate, and social attitude were not statistically significant to affect the growth of MSEs.

The future research line will attempt to:

- Investigate the political, technological, and other factors that determine the growth of micro and small enterprises.
- The future study is better to address country-level factors.

Abbreviation

MSEs: Micro and small enterprises

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s13731-021-00165-5>.

Additional file 1. Akaike's information criterion and Bayesian information criterion, logistic regression calculations, and area under ROC curve for sensitivity and specificity.

Acknowledgements

I would like to thank the anonymous reviewers, Sisay G. for his guidance and technical support, and the data collectors.

Author's contributions

All research activities were done independently by the author. The author(s) read and approved the final manuscript.

Funding

The author has not received funding from any organization.

Availability of data and materials

All datasets are included in the manuscript.

Declarations**Competing interests**

The author declares no competing interests.

Received: 7 December 2020 Accepted: 1 June 2021

Published online: 17 July 2021

References

- Abebaw, W. K., Mulate, S., & Nigussie, L. (2018). Factors affecting the performance of micro and small scale enterprises: Experience from North Shewa Zone, Ethiopia. *Journal of Investment and Management*, 7(2), 70–76.
- Afande, O. F. (2015). Factors influencing growth of small and microenterprises in Nairobi central business district. *Journal of Poverty, Investment and Development*, 9(1), 104–139.
- Alemayehu, D., & Gecho, Y. (2016). Determinants of micro and small enterprises growth: The case of Durame Town, Kembata Tembaro Zone, Southern Nations and Nationalities and Peoples Region, Ethiopia, 2016. *International Journal of Business and Economics Research*, 5(5), 161–175.
- Alemu, K. S., & Dame, D. B. (2017). Determinants of micro and small enterprises success: The case of Ambo Town, Ethiopia? *Journal of Asian and African Social Science and Humanities*, 3(1), 86–96.
- Alen, S., & Bhero, S. (2017). Primary factors threatening survival of SMEs in Mozambique. *AFRREV STECH: An International Journal of Science and Technology*, 6(2), 115–126.
- Ardjouman, D., & Asma, B. (2015). Marketing Management Strategies Affecting Performance of Enterprises (SMEs) in Cote d'Ivoire. *International Journal of Business and Social Science*, 6(4), 141–150.
- Assefa, M., & Cheru, E. (2018). Factors affecting the growth of women entrepreneurs in micro and small enterprises in Ethiopia. *Abyssinia Journal of Business and Social Sciences*, 3(1), 32–38.
- Aworemi, J. R., Abdul-Azeez, I. A., & Opoola, N. A. (2010). Impact of socio-economic factors on the performance of small-scale enterprises in Osun State, Nigeria. *International Business Research*, 3(2), 92.
- Bawuah, B., Yakubu, A. S., & Alhassan, M. (2014). The effects of interest rate on micro, small and medium enterprises financing decision in Wa Municipality of Ghana. *International Journal of Business, Humanities and Technology*, 4(4), 81–90.
- Bouazza, A. B., Ardjouman, D., & Abada, O. (2015). Establishing the factors affecting the growth of small and medium-sized enterprises in Algeria. *American International Journal of Social Science*, 4(2), 101–115.
- Cherkos, T., Zegeye, M., Tilahun, S., & Awvari, M. (2018). Examining significant factors in micro and small enterprises performance: Case study in Amhara region, Ethiopia. *Journal of Industrial Engineering International*, 14(2), 227–239.
- Cicea, C., Popa, I., Marinescu, C., & Cătălina Ștefan, S. (2019). Determinants of SMEs' performance: Evidence from European countries. *Economic Research-Ekonomska Istraživanja*, 32(1), 1602–1620.
- Degefu, D. G. (2018). Factors that determine the growth of micro and small enterprises: In the case of Hawassa City, Ethiopia. *iBusiness*, 10(04), 185.
- Gbadeyan, R. A., Oppong, N. Y., & Oduro, S. (2017). Effects of socio-economic factors on entrepreneurship activities in Cape Coast, Ghana. *Journal of Entrepreneurship and Business*, 5(1), 39–51.
- Gebremeriam, F. M. (2017). Factors affecting the growth of women-operated micro and small enterprises (MSEs) in Ethiopia. *Üniversitepark Bülten*, 6(1), 56.
- Giday, B. E. R. I. H. U. (2017). *Determinants of micro and small enterprises performance in Godere Woreda of Gambella Regional State, Ethiopia (Doctoral dissertation, Arba Minch University)*.
- Gujarati, D. N., & Porter, D. (2009). *Basic econometrics*. Mc Graw-Hill International Edition.
- Gunasekaran, A., Rai, B. K., & Griffin, M. (2011). Resilience and competitiveness of small and medium size enterprises: An empirical research. *International Journal of Production Research*, 49(18), 5489–5509.
- Gutu, T. G., & Yali, A. S. (2020). Association of owner related and external factors with micro and small manufacturing enterprises growth in Ethiopia. *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah*, 8(2), 155–174.

- Kamunge, M. S., Njeru, A., & Tirimba, O. I. (2014). Factors affecting the performance of small and micro enterprises in Limuru Town Market of Kiambu County, Kenya. *International Journal of Scientific and Research Publications*, 4(12), 1–20.
- Kebede, M., & Simesh, G. (2015). The impact of environmental factors on the performance of micro & small-scale enterprises in East Gojjam Zone, Ethiopia. *International Journal of Science and Research*, 6(3), 1619–1629.
- King, K., & McGrath, S. (2002). *Globalisation, enterprise and knowledge: Education, training and development in Africa*. Symposium Books Ltd.
- Leza, T., Rajan, S., & Kuma, B. (2016). Determinants of employment growth of micro and small enterprises in Wolaita Zone, Ethiopia. *International Journal of Current Research*, 8(12), 43177–43186.
- Mamo, W. B. (2020). The effect of government incentives on the performance of micro and small enterprises (MSE's) in Eastern Ethiopia: Evidence from Harar, Dire Dawa City Administration and Haramaya Town. *Journal of Economics and Business*, 3(3), 1125–1135.
- Mandl, I., & Dorr, A. (2007). *CSR and competitiveness. European SMEs' good practice. Consolidated European Report*, Vienna.
- Margaretha, F., & Supartika, N. (2016). Factors affecting profitability of small medium enterprises (SMEs) firm listed in Indonesia Stock Exchange. *Journal of Economics, Business and Management*, 4(2), 132–137.
- Maziku, P., Majenga, A., & Mashenene, G. R. (2014). *The effects of socio-cultural factors on the performance of women small and medium enterprises in Tanzania*.
- Meresa, M. (2018). Factors affecting the performance of small-scale enterprise (restaurant and hotels) Inraya Azebo Wereda: The case of Mohoni, Maychew and Korem. *International Journal of Managerial Studies and Research (IJMSR)*, 6(1), 68–92 <https://doi.org/10.20431/2349-0349.0601010>.
- Mersha, D., & Ayenew, Z. (2017a). *Determinants of access to formal financial sources of micro and small enterprises (MSEs) in West Oromia Region, Ethiopia*.
- Mersha, D., & Ayenew, Z. (2017b). *Does access to formal financial sources lead to growth of micro and small enterprises? Evidence from West Oromia Region, Ethiopia*.
- Mulugeta, K., & Getaendale, S. (2017). The impact of environmental factors on the performance of micro & small-scale enterprises in East Gojjam Zone, Ethiopia. *International Journal of Science and Research (IJSR)*, 6(3), 1619–1629.
- Ndege, M., & Park, B. (2015). Factors that affect the growth and development of small, micro and medium-sized business enterprises in the Vaal Triangle Region of Gauteng province in South Africa. *European Journal of Business, Economics and Accountancy*, 3(3), 73–100.
- Nejati, M., Amran, A., & Ahmad, N. (2014). Examining stakeholders' influence on environmental responsibility of micro, small and medium-sized enterprises and its outcomes. *Management Decision*, 52, 2021–2043.
- Onakoya, A. B., Fasanya, I. O., & Abdulrahman, H. D. (2013). Small and medium scale enterprises financing and economic growth in Nigeria. *European Journal of Business and Management*, 5(4), 130–136.
- Prijadi, R., & Desiana, P. M. (2017). Factors affecting the profitability and growth of small & medium enterprises (SMEs) in Indonesia. *International Journal of Economics & Management*, 11, 35–44.
- Saleem, M. A. (2017). The impact of socio-economic factors on small business success. *Geografia-Malaysian Journal of Society and Space*, 8(1), 24–29.
- Sitharam, S., & Hoque, M. (2016). Factors affecting the performance of small and medium enterprises in KwaZulu-Natal, South Africa. *Problems and Perspectives in Management*, 14(2), 277–288.
- Solomon, G. (2004). *Entrepreneurship and the impact of entrepreneurial orientation training on SMMEs in the South African context: A longitudinal approach (Doctoral dissertation, University of the Western Cape)*.
- Tee, E., Boadi, L., & Opoku, R. (2016). The effect of tax payment on the performance of SMEs: The case of selected SMEs in Ga West Municipal Assembly. *European Journal of Business and Management*, 8(20), 119–125.
- Tekola, H., & Gidey, Y. (2019). Contributions of micro, small and medium enterprises (MSMEs) to income generation, employment and GDP: Case study Ethiopia. *Journal of Sustainable Development*, 12(3), 46–81.
- Tuyakira, P., Venter, E., & Smith, E. (2014). The impact of corporate social responsibility factors on the competitiveness of small and medium-sized enterprises. *South African Journal of Economic and Management Sciences*, 17(2), 157–172.
- Wolde, F., & Geta, E. (2015). Determinants of growth and diversification of micro and small enterprises: The case of Dire Dawa, Ethiopia. *Developing Country Studies*, 5(1), 61–75.
- Yamane, T. (1967). *Statistics: An introductory analysis (No. HA29 Y2 1967)*.
- Yonis, M. B., Woldehanna, T., & Amha, W. (2018). Impact of public intervention on micro and small enterprises performance in Ethiopia: A firm level empirical evidence. *International Journal of Emerging Markets*, 13(5), 1108–1131 <https://doi.org/10.1108/IJoEM-10-2016-0259>.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.