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Article

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Journal of Innovation and Entrepreneurship

Provided in Cooperation with:

Springer Nature

Suggested Citation: Alene, Endalew Terefe (2020) : Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia, Journal of Innovation and Entrepreneurship, ISSN 2192-5372, Springer, Heidelberg, Vol. 9, Iss. 1, pp. 1-20, <https://doi.org/10.1186/s13731-020-00132-6>

This Version is available at:

<https://hdl.handle.net/10419/259612>

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Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia

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Abstract

Purpose: The purpose of this study was to explore determinants that influence women entrepreneurs' performance in micro and small enterprises in Gondar city, Northwest Ethiopia, and in turn contribute to entrepreneurship-related literature mainly in developing countries.

Design/methodology/approach: The study employed an explanatory research design with agreement of primary data collection via a cross-sectional survey questionnaire followed by quantitative research approach. The sample of this study was 180 women entrepreneurs and selected using random sampling technique.

Findings: The findings of this study revealed that educational level, previous entrepreneurial experience, access to business training, access to finance, access to business information, government support, land ownership, and tax are significant in explaining women entrepreneurs' performance in one hand. On the other side, however, age, marital status, access to market, and access to physical infrastructure are found to be insignificant variables in determining women entrepreneurs' performance.

Research limitations/implications: The study used one time data for determinants like level of education, previous working experience, age, and profitability of the enterprise. Thus, due to frequent change in such variables, the study may not reflect the dynamics of the data, which would have a convincing influence on the conclusion. In addition, the research has only consisted of 180 samples. Moreover, such number may not represent the whole population of the entrepreneurs of Ethiopian MSEs. In future research, it is advisable to expand study factors, use interviews as a research tool, and make a comparison between women and men entrepreneurial performances.

Practical implications: The paper might serve as an input for officials to consider such determinants and encourage an environment that increases women entrepreneurs' performance. In addition, the study might help women entrepreneurs in addressing the factors affecting performance to take actions towards improving their performance and in turn contribute to job creation, wealth, innovation, and poverty alleviation.

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Originality/value: This study contributes to the literature on the determinants of women entrepreneurs' performance in micro and small enterprises. Specifically, it tests the impact of educational level, age, marital status, previous entrepreneurial experience, access to business training, access to finance, access to business information, access to market, access to physical infrastructure, government support, land ownership, and tax on the performance of women entrepreneurs.

Keywords: Women entrepreneur, Performance, Gondar city, Micro and small enterprise, Determinant

Introduction

In the twenty-first century, more attention is given to the subject of entrepreneurship through establishing micro and small enterprises. Extensive evidence shows that the performance of women-owned micro and small enterprises (here after called as MSEs) played pivotal roles for the development of a nation (Shakeel, Yaokuang, & Gohar, 2020) and the well-being of societies by creating jobs, wealth, and innovations (Mozumdar, Van Der Velde, & Omta, 2020). In Ethiopia, the importance of enterprises owned by women entrepreneurs is noticed on different documents like industrial policy, MSE development strategy, and the growth and transformation plans I and II to accelerate growth and reduce poverty (Meressa, 2020). Despite this, both the growth and performance of women-owned MSEs remain a concern, although women entrepreneurship has gained popularity in the country with a growing number of women to start and run their own business (Awoke, 2019). Moreover, the performance of women-owned MSEs has been persistently influenced by numerous factors; even a significant number of women's interest in business show some escalation in Ethiopia, but their success is still insignificant (Meressa, 2018).

To identify the determinants that influence the performance of women entrepreneurs, a detailed and regular study at country, city, and firm level is important to provide result-oriented and sustainable support to the enterprises (Awoke, 2019; Gizaw, Tsega, & Hailegiorgis, 2019; Tekele, 2019). With reference to this, a small number of studies have been carried out in different parts of the country to identify determinants that influence the performance of MSEs. This includes the studies made by Abdissa and Fitwi (2016), Aemiro (2019), Assefa and Cheru (2018), Gizaw et al. (2019), Hawando (2017), Meresa (2018), and Tekele (2019) to mention a few. However, these studies discuss constraints faced by MSEs in general without focusing on the possible differences between women- and men-owned MSEs. In addition, these studies also neither provide consistent finding nor address the factors that influence the performance of women entrepreneurs in the country. They tried to explore the factors affecting the performance of MSEs in Ethiopia. So far, to the best of the researcher's knowledge, too limited studies were conducted on the factors affecting the performance of women entrepreneurs in Ethiopia. The first one is a study conducted by Awoke (2019) that assessed determinants of women entrepreneurs performance in Ethiopia the case of Hawassa city. This study incorporated only education level, access to credit, business experience, market linkage, and job satisfaction to investigate performance influencing factors, ignoring more of business performance constraint variables discussed in the

literature. Secondly, a desk review study on women entrepreneurs in Ethiopia was conducted by Solomon (2010) only using secondary data.

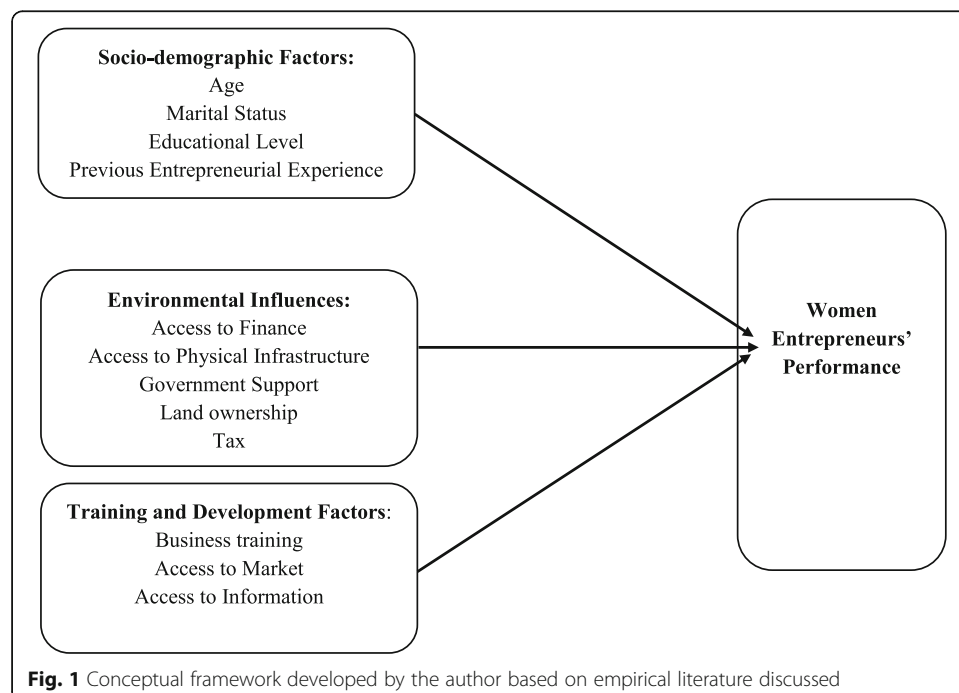
Correspondingly, apart from the Ethiopian context, previous studies have been carried out in different parts of the world to identify the factors that affect women entrepreneurs' performance in MSEs. Still, evidence in developed and developing countries revealed inconclusive findings with regard to the determinants. Although the impact and magnitude of variables on business performance vary from country to country, region to region, and firm to firm, there are many common factors considered as business performance determinants in literature of women entrepreneurs in MSEs. To mention a few, educational level, access to finance, access to training, access to market, legal and government barriers, access to network, lack of infrastructure, and cultural factors are among others. These variables were collected from studies made by Abiodun and Amos (2018); Bakar and Ahmad (2016); Brixiová and Kangoye (2019); Chathurangani, Hemathilake, and Samudrika (2019); George (2018); Hasan and Almubarak (2016); Haxhiu (2015); Kanapathipillai and Azam (2019); Kyalo (2016); Leszczyński (2016); Mozumdar et al. (2020); Muogbo and John-Akamelu (2019); Mwanja (2015); Panda (2018); Raheem (2013); Saidi et al. (2017); Shakeel et al. (2020); Simion (2018); Wangari (2017); Welsh, Kaciak, Memili, and Minialai (2018); Welsh, Kaciak, and Shamah (2017); and Zeb (2018) through systematic review. Therefore, the above evidence suggests the following reasons why additional research in the area of women entrepreneurs in MSEs is needed in the context of Ethiopia in general and Gondar city in particular as one of an emerging economy center of the country.

Accordingly, the first reason is the performance of women entrepreneurs in MSEs and has been determined by numerous factors; even a significant number of women's interest in business show some escalation in Ethiopia, but their success is still insignificant. If so, women entrepreneurs in Gondar city are no exception to this. Secondly, despite the fact that previous empirical studies of different countries have identified the common determinants associated with the performance of women entrepreneurs, the influence and magnitude of each determinant vary from one area to the other which provide inconsistent findings that cannot be generalized and need further research. Lastly, in the context of Ethiopia, existing studies on determinants that influence the performance of women entrepreneurs missed the main determinants, for example, demographic variables, and no study is conducted particularly in the selected case study area which leads the researcher to conduct this study to fill the gap on the issue.

As a result, against this background, the purpose of this study was to explore determinants that influence the performance of women entrepreneurs in MSEs in Gondar city of Northwest Ethiopia. The novelty of this paper is that it incorporated demographic variables and environmental influences so as to fill the gap in the women entrepreneurs' performance literature in developing countries unlike the existing studies made by Awoke (2019) and Solomon (2010). Most importantly, this paper tried to answer the question of what determinants influence the performance of women entrepreneurs in MSEs in Gondar city using regression analysis. This paper proceeds as follows: First, it discusses review of related literature. Second, it describes the methodology of the study. Third, it discusses and presents the statistical results, and finally, it presents the conclusion, limitation, and future implication of the study.

Literature review

This section presents the review of empirical literature via reviewing the works of different scholars, researchers, and practitioners on determinants of women entrepreneurs' performance. In this context, many empirical studies have been conducted on determinants of women entrepreneurs' performance, covering various scopes using different sample entrepreneurs and methodologies globally. However, findings of many studies with regard to the variables influencing the performance of women entrepreneurs produced numerous factors with different impacts on performance. To identify the most commonly used variables as performance determinants, a concentrated and careful systematic review of literature was carried out on relatively recent empirical studies. In this context, the author reviewed studies conducted by Abdissa and Fitwi (2016); Abimbola and Agboola (2011); Carranza, Dhakal, and Love (2018); Chebii, Ogada, and Achar (2015); Danga, Chongela, and Kaudunde (2019); Doris (2016); Kyalo (2016); George (2018); Hasan and Almubarak (2016); Hundera (2014); Jha, Makkad, and Mittal (2018); Kamunge and Tirimba (2014); Kanapathipillai and Azam (2019); Lucas (2017); Mandawa (2016); Mbiti, Mung, and Kyalo (2015); Muogbo and John-Akamelu (2019); Nasri and Muhammad (2018); Sajilan, Hadi, and Tehseen (2015); Salah and Kaplan (2018); Soomro, Abdelwahed, and Shah (2019); Tekele (2019); and Zeb (2018) randomly. As a result, twelve main variables namely age, marital status, educational level, previous entrepreneurship experience, access to business training, access to finance, access to market, access to information, access to government support, access to physical infrastructure, land ownership, and tax were taken from the studies. The detail review on the linkage between each variable and women entrepreneurs' performance is therefore discussed below to develop a clear conceptual framework (Fig. 1).



Age

Age is used in social science research to classify people and point out the differences among them (Lucas, 2017). It is a time of life, and one's qualification and power increase with age. Moreover, Peter and Munyithya (2015) assert that skills of a person improve with age. According to Soomro et al. (2019), there are positive and significant linkages between age and business performance of entrepreneurs in the MSE sector of developing countries. In addition, Sajilan et al. (2015) argued that young entrepreneurs impact more on the firm's performance than old entrepreneurs.

Marital status

The study used marital status as a determinant factor of women entrepreneurs' performance in MSEs. This is understandable from the context that married women with children are faced with more responsibilities of feeding and clothing their children and themselves, and taking care of other members of their household. In line with this, studies by Chebii et al. (2015), Peter and Munyithya (2015), and Soomro et al. (2019) argued that there is a negative relationship between marital status and business performance. This means that being a woman does not represent a difference but being a married woman does in relation to performance. They further noted that single women perform in business more similar like men and their networks are diverse.

Educational level

Education is presumably related to knowledge, skills, motivation, self-confidence, problem solving ability, commitment, and discipline. Higher education is expected to increase the ability to cope with problems and seize opportunities (Welsh et al., 2017). In addition, it is believed that entrepreneurs with higher educational qualification are expected to make better quality decisions to manage a firm in a way that reduces the likelihood of failure (Saidi et al., 2017). Therefore, firms owned and managed by entrepreneurs with higher educational experience increases in success than their counterparts (Mozumdar et al., 2020).

Previous entrepreneurial experience

The effect of previous entrepreneurial experience upon the performance of small businesses was tested in several studies. Accordingly, Carranza et al. (2018) found that longer previous entrepreneurial experience has a positive impact on business performance. Shakeel et al. (2020) and Muogbo and John-Akamelu (2019) argued that previous experience equips owner and/or managers with the knowledge and skills required to identify and exploit opportunities, assess market trends, and intuitively make decisions pertaining to customer needs as well as competitors' moves. This is to mean that previous entrepreneurial experience and firm performance have a positive relationship, that is, as the age of an individual firm increases, the firm profitability also increases (Mandawa, 2016).

Business training

Business training influences the decision and performance of women entrepreneurs, irrespective of the size and stage of business (Hundera, 2014). This is to mean that lack of training could have an effect in women entrepreneurs to explore the personal

entrepreneurial competence that might help them improve their business success (Gizaw et al., 2019). Moreover, the findings of Jha et al. (2018) suggested that a customized training program for women entrepreneurs is essential at each stage of businesses to enhance the enterprises' success. Therefore, women entrepreneurs perform better in their business when they access business training (Mandawa, 2016).

Access to finance

Availability of finance ensures the profitability of firms as it injects working capital. In this context, studies by Danga et al. (2019), Kamunge and Tirimba (2014), Kanapathipillai and Azam (2019), and Tekele (2019) argued that high working capital permits to run a huge business and allows using advanced technology which increases the productivity level and quality. Moreover, entrepreneurs who suffer capital constraints in their initial business investment have lower profits, and their survival rate is lower than those who had adequate capital (Wangari, 2017). Therefore, women entrepreneurs perform better in their businesses when they have financial accessibility (George, 2018).

Access to physical infrastructure

Access to public physical infrastructure services includes water, electricity, serviceable roads, telecommunication, telephones, electronic media, and postal services which are all crucial for business start-up, development, and performance. Limited access to public physical infrastructure services is a major constraint to MSEs' survival and growth as it limits operations and restricts access to markets and raw materials. Previous studies by Danga et al. (2019), Kamunge and Tirimba (2014), and Tekele (2019) reported that the inadequacy of the physical infrastructure is a principal cause of low levels of investment and unsatisfactory performance of small and micro enterprises. Thus, infrastructure can influence the performance of MSEs positively or negatively. Good infrastructure enhances positive impacts to the MSEs' performance while poor infrastructure attributes a negative impact on the performance of MSEs (Danga et al., 2019).

Government support

Government support such as providing aids, funds, training projects, and tax relaxation can play a vital role in the success of women entrepreneur organization. As Salah and Kaplan (2018) stated, government supports are beneficial to women entrepreneurs. However, strict policies of the government related to investments and towards micro and small-sized enterprises adversely influence women entrepreneur. Moreover, previous studies by Haxhiu (2015) and Zeb, Jan, Ihsan, and Shah (2019) found that legal and administrative factors have the highest impact on the performance of women entrepreneurs. This is to mean that this occurs due to the lack of government support, access to policymakers, bureaucracies, and the overall legal and administrative factors.

Levied tax

According to Tee, Boadi, and Opoku (2016), taxation plays an important role in the development of every economy as well as the growth of micro and small enterprises (MSEs). They argued that taxes imposed on micro and small enterprises impact their performance in terms of profits in different ways. Moreover, studies by Haxhiu (2015),

Abdissa and Fitwi (2016), and Hasan and Almubarak (2016) on obstacles being faced by women entrepreneurs indicated that taxation, regulations, and legal barriers can play as major constraints for women entrepreneurs and success of their business. On the other hand, Atawodi and Ojeka (2012) found that there is a negative relationship between tax and a small business performance to sustain. This means that firms paying the lower taxes are able to increase their performance for a longer period of time than those paying higher taxes.

Land ownership

Evidently, business operating in premises allotted by government agencies had better chance of success compared to those set up in privately rented premises (Meressa, 2020). Moreover, a research conducted by Doris (2016) indicated that availability of land is very important for the success and sustainable growth of entrepreneurs because it creates access to resource and the necessary markets. Land in which MSEs are to display and sell their products is also the major problem affecting the performance of MSEs (Kyalo, 2016). According to Abdissa and Fitwi (2016), micro and small-scale enterprises having enough own working premises (land) grow more than those enterprises which have no working premises and selling outlets. The issue of land provision and the land lease system has constrained the chance of micro and small enterprises' success (Carranza et al., 2018). Furthermore, Hasan and Almubarak (2016) reported that land ownership has significant influence on women entrepreneurs' performance.

Access to market

Firms can have forward linkage with customers or other sellers and backward linkage with their raw material suppliers to get the needed materials to produce goods or services (Meressa, 2020). This is to mean that the absence or low supply of raw materials may increase the cost of production and bring other drawbacks like stagnation, low quality of products, and poor performance among others (Nasri & Muhammad, 2018). In other words, adequate supplies of raw materials ensure good performance of firms and unavailability of raw materials can be a barrier for success. Therefore, access to market and micro and small enterprises' performance have a positive relationship (Jha et al., 2018).

Access to information

Lack of information has been reported as one of the key factors affecting women entrepreneurs' performance in developing countries (Nasri & Muhammad, 2018). Accordingly, it is believed that enterprises that have access to information grow faster than their counterparts because using information can improve and strengthen customer relationships, enhance firm image, enhance market linkage, and enable them to compete with other firms (Giday, 2017; Kamunge & Tirimba, 2014). Moreover, having a social network is a valuable asset that can help an entrepreneur to obtain access to information as well as resources like credit. Social networks can play a higher role in helping entrepreneurs to overcome obstacles related to transaction costs, contract enforcement, and regulation

(Mulugeta, 2014). Therefore, enterprises that have information perform better than their counterparts.

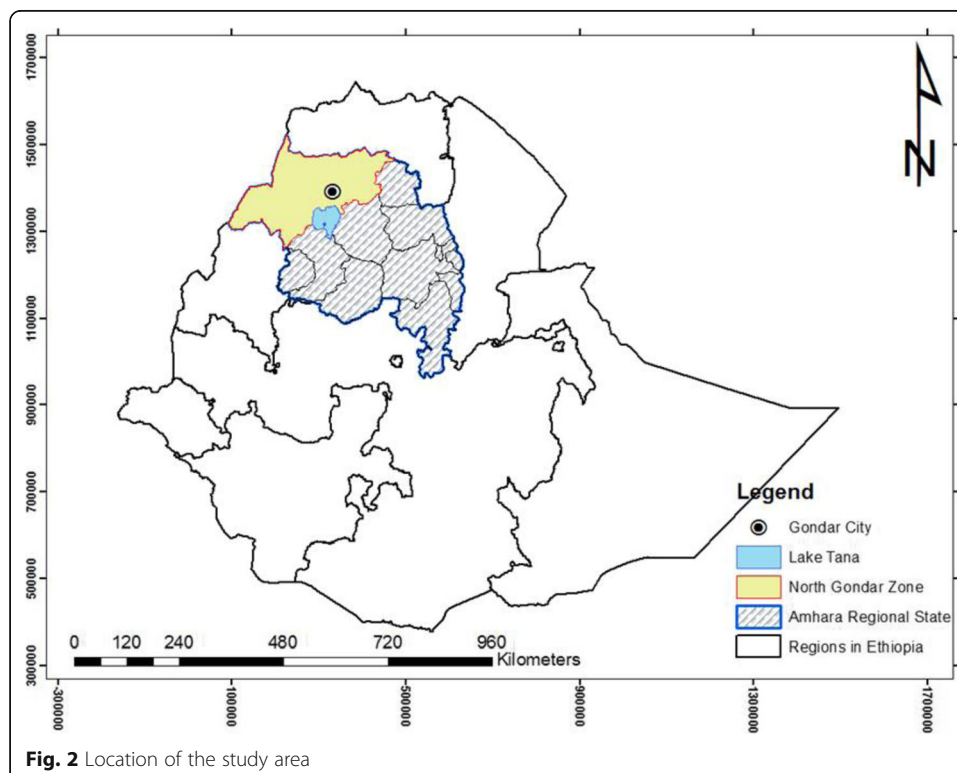
Materials and methods

Study area

This study is conducted in Gondar city, Northwest Ethiopia. The city is found in Amhara regional state of Ethiopia. Gondar city is located at $12^{\circ} 36'$ North and $37^{\circ} 28'$ East and has an average elevation of 2201 m above the sea level. The city to a large extent lies on a semi-flat plain and is surrounded on three sides by a crown of 3000-m-high mountains. The city is also among the ancient, large, and currently the fastest growing city in Ethiopia. Currently, according to the Central Statistical Agency (CSA), the population of the city is projected to be 360,600 in , 2018 (Fig. 2).

Research design, data, and sample size determination

Cresswell (2014) suggests that the researcher should choose the research design (strategy) that best suits the needs and purpose of the research in order to obtain research outcomes that have real-world practice value. In this context, any design can be selected by researchers based on the nature of research problem and questions to address the problem. Accordingly, researchers could choose among different types of possible research designs depending on purpose of the research, method of data collection, time dimension, and research approach as an architect can choose among different types of possible building designs depending on factors such as purpose of the building, method of construction, time of construction, and the like (Bhattacharjee,



2012). This study, therefore, employed an explanatory cross-sectional survey research design with primary and secondary data. In this context, the study used primary data that were collected with a structured questionnaire using cross-sectional survey, and secondary data were collected from the literature review and other data sources. The research also employed a two-stage random sampling technique to select the sample respondents in the study area. In the first stage, Maraki sub-city was purposively selected to conduct the study since this sub-city seizes an area which has a large number of women entrepreneurs. The number of women entrepreneurs in this sub-city was 1250. In the second stage, the total sample size was determined using the following formula (Eq. 1):

$$n = \frac{Z^2 pq}{e^2} \quad (1)$$

where n is the sample size, Z is the value found in statistical tables which contain the area under the normal curve that cuts off an area α at the tails ($1 - \alpha$ equals the desired confidence level, e.g., 95%) (1.96), p is the estimated proportion of an attribute that is present in the population (0.5), q is $1 - p$, and e is the desired level of precision (0.07). Hence, using the above formula (1), the calculated number of sample size is 196. This number of sample size was also substantiated by Creative Research Systems (Kothari, 2004) sample size calculation method. Hence, if $N < 10,000$ population size, the computed sample size was decreased to 180 using the following formula (Eq. 2):

$$f_n = n / (1 + n/N) \quad (2)$$

where f_n is the desired sample size, n is the sample size, and N is the target population.

Moreover, respondents were randomly selected from the sub-city based on the sub-city roster used as a sampling frame.

Instrument determination

Data were generated through close-ended questions. Structured questionnaire was used to collect socio-demographic, environmental influences, training, and development variables on the performance of women entrepreneurs using a Likert scale. The Likert scale was divided into four categories: strongly agree, agree, disagree, and strongly disagree for different statements that represent knowledge, feelings, and practice components. The four categories were then grouped into two categories of positive and negative. The positive category includes responses given as strongly agree and agree, while the negative category includes responses given as disagree and strongly disagree. The summary measures are then developed by assigning a value of "1" if respondents answered positively to two or three of the components, and a value of "0" if respondents answered negatively to two or three of the components. All of the variables were measured on ratio scales. Similarly, the dependent variable, i.e., performance of women entrepreneurs (profitability), was measured using the Likert scale as four categories such as strongly agree, agree, disagree, and strongly disagree. However, the four categories were later grouped into two categories of positive and negative. The positive category includes responses given as strongly agree and agree, while the negative category includes responses given as disagree and strongly disagree. The summary

measures for the dependent variable are then developed by assigning a value of “1” if the respondents answered positively to three components, and a value of “0” if the respondents answered to two components (see below) (Table 1).

Determination of variables in the model

The study has two variable categories. In this context, the dependent variable of the current study is performance of women entrepreneurs in MSEs. Along with, age,

Table 1 Description of the dependent and independent variables

Variable in the model	Definition of variables	Expected sign
WEP (women entrepreneurs' performance: profit)	WEP (profit) was assigned a value of “1” if women-owned business is profitable and “0” if not	
AGE (age of respondents)	AGE was given in years. Age is considered to be important since a woman may increase her performance (e.g., knowledge of business) as she gets older. A value of “1” was given if the age of the respondent was > 30 years and a value of “0” was given if the age of the respondent was 18+ and ≤ 30 years. (< 18 years is underage and 30 years old is a cutoff point for young and adult groups in the Ethiopian context)	+
EDUL (educational level of a respondent)	EDUL was measured using the attainment of grade levels by the respondent. Education helps to raise performance level about businesses. A value of “1” was given if the educational status of the respondent was completed 10 + 1 and 10 + 2 and “0” otherwise.	+
MARS (marital status of a respondent)	MARS was the marital status of the respondent. A value of “1” was given if a respondent was legally married and “0” otherwise.	–
PREEXP (previous entrepreneurial experience of a respondent)	PREEXP was measured using previous entrepreneurial experience years in business sector. Previous entrepreneurial experience helps to raise performance level about entrepreneurial businesses. A value of “1” was given if their previous experience was > 10 years, and a value of “0” was given if their previous experience was 1+ and < 10 years.	+
ACCF (access to finance)	ACCF was the accessibility of finance from financial institutions for the women. A value of “1” was assigned if the women have access to finance and “0” if not	+
ACCMR (access to market)	ACCMR was the accessibility of market for their product within the competition. A value of “1” was given if the women have access to market and “0” if not	+
ACCBINF (access to business information)	ACCBINF was the accessibility of business information to exploit business opportunities. A value of “1” was given if the women have access to business information and “0” if not	+
ACCBUTR (access to business training)	BUTR was the accessibility of better business trainings. Business training helps to raise performance level about different businesses. A value of “1” was given if the women have access to business training and “0” if not	+
LANOWN (land ownership)	LANOWN was the lot used to run the business. A value of “1” was given if the women owned a land and “0” if not	+
ACCPHINFRA (access to physical infrastructure)	ACCPHINFRA was the availability of infrastructure.	+
GOVTSUP (government support)	GOVTSUP was the business assistance and support from the government. A value of “1” was given if the women received support from the government and “0” if not	+
LEV TAX (levied tax)	LEV TAX was the reasonable tax levied on the business. A value of “1” was given if the women believed the tax is reasonable and “0” if not	–

marital status, educational level, previous entrepreneurial experience, business training, access to finance, land ownership, access to physical infrastructure, access to market, access to information, government support, and reasonable tax levied were the independent variables included in the empirical model.

Empirical studies provide different variables for the performance of women entrepreneurs. Among these, total asset, sales growth, employment size, profit, market share, and customer base are mostly known (Doris, 2016). These measures depend upon the ease of availability of the data and good judgment of the researcher. In this context, profit is mostly used in MSEs' performance literature globally (Meechaiwong, Somjai, Pol, & Girdwicha, 2019; Mozumdar et al., 2020; Shakeel et al., 2020; Welsh et al., 2017). Consequently, this study considered profit as best fitted measure of MSEs' performance.

Much of women entrepreneurs' performance related studies applied both multiple linear regression and binary logistic regression models. For example, Doris (2016), Meechaiwong et al. (2019), and Shakeel et al. (2020) used multiple linear regression model in their studies. However, Mozumdar et al. (2020) and Welsh et al. (2017) used binary logistic regression in their studies. Therefore, both logistic and multiple regressions could be used in MSEs' performance related studies. On the one side, multiple linear regressions could be chosen if the performance measure used as the dependent variable takes a continuous measure. On the other hand, binary logistic regression model could be used if the performance measure used as the dependent variable takes a discrete (categorical) measure. Accordingly, this study applied binary logistic regression (logit) model consistent with that of Mozumdar et al. (2020) and Welsh et al. (2017) since enterprises' performance is considered as a discrete (categorical) variable.

In this context, different literatures claim that the following assumption of logistic regression model/logit model needs to be tested. To this effect, contingency coefficient for dummy/discrete independent variables was computed to check the presence of multicollinearity problem among them. By definition, contingency coefficient is a measure of the degree of relationship/association of dependence among categorical/dummy independent variables included in the study. As a decision rule, a contingency coefficient greater than 1 indicates the presence of multicollinearity among dummy independent variables. In this study, twelve dummy independent variables were included and their contingency coefficients were measured using SPSS.

The model used for this analysis is presented as Eq. 3:

$$Y_i = a + b_1x_1 + \dots b_{12}x_{12} \quad (3)$$

where Y_i is the dependent variable (performance of women entrepreneur), a is the regression constant (Y -intercept), b_{1-12} are the slope of the regression line (are coefficients indicating the degree of association between each independent variable and the outcome), and x_{1-12} are the independent variables.

Results and discussion

Socio-demographic characteristics of respondents

During data collection, 180 questionnaires were distributed to the sample respondents. The response rate is 100% (all respondents returned completed questionnaire). The

result of the survey indicates that the average age of respondents was 39 years with age range between 18 and 60 years. With regard to educational level of respondents, more than half of the respondents had completed 10 + 1 and 10 + 2 certificate from TVET (Technical and Vocational Education Training), whereas the remaining respondents had completed their primary and secondary education. Moreover, nearly two third of the respondents were single in their marital status, while one third of them were married. The average year of previous entrepreneurial experience of the respondents was 12 years within the range between 1 and 25 years of entrepreneurial experience as shown in Table 2.

Econometric results and discussion on performance determinants

Determining the factors that may significantly influence on women entrepreneurs' performance in MSEs requires the employment of econometric analysis. In this context, therefore, the study used binary logistic regression analysis (logit model) to identify factors that significantly influence the performance of women entrepreneurs. Consequently, profit of the firm was proposed to be used as means of women entrepreneurs' performance measurement in MSEs.

Based on the analysis, Table 4 provides the results of binary logistic regression of each variable, while Table 3 also provides the correlation matrix of each dummy variable indicating that there is no multicollinearity problem among the independent variables. To this end, the table has shown that there is no strong relationship within each independent variable.

The result of the regression output depicted in Table 4 revealed that educational level is statistically significant and has a positive relationship with performance of women entrepreneurs. This implies that firms owned and managed by women entrepreneurs with higher formal educational experience have shown higher performance in terms of profit than their counterparts. This finding is consistent with the finding of Saidi et al. (2017) and Rajni & Mehta (2018) who reported that entrepreneurs with higher educational qualification are expected to make better quality decisions to manage a firm in a

Table 2 Socio-demographic profile of the respondents ($N = 180$)

Variables	Specific indicators	Values
Age	Average age	39 years
	Range of age	18–60 years
Educational level	Primary education (1–8)	10.6%
	Secondary education (9–12)	21.3%
	TVET (10 + 1 and 10 + 2)	52.1%
	College graduate	16.0%
Marital status	Married	33.5%
	Single	58.7%
	Divorced	4.3%
	Widowed	3.5%
Pervious entrepreneurial experience	Average	12 working years
	Range	1–25 years

Source: survey result, 2020

Table 3 Correlation matrix of the independent variables with outcome variable

Variables	WEP	AGE	EDUL	PREEXP	MARS	ACCF	ACCMR	ACCBUTR	LANOWN	PHINFRA	GOVTSUP	TAX	ACCBINF
WEP	1												
AGE		1											
EDUL			1										
PREEXP				1									
MARS					1								
ACCF						1							
ACCMR							1						
ACCBUTR								1					
LANOWN									1				
PHINFRA										1			
GOVTSUP											1		
TAX												1	
ACCBINF													1

WEP women entrepreneurs' performance, AGE age of the respondents, EDUL educational level of the respondents, PREEXP previous entrepreneurial experience of the respondents, MARS marital status of the respondents, ACCF access to finance, ACCMR access to market for products, ACCBUTR access to business training, LANOWN land ownership, PHINFRA physical infrastructure access, GOVTSUP government support, TAX levied tax, ACCBINF access to business information

Source: survey result, 2020

^aCorrelation is significant at the 0.05 level (2-tailed)

^bCorrelation is significant at the 0.01 level (2-tailed)

Table 4 Results of the logit (entry method) model showing determinants that influence women entrepreneurs' performance ($N = 180$)

Independent variables	B	SE	Sig (p)	Exp(B)
AGE	.793	.592	.180	.452
EDUL	2.323	.798	.004**	.098
MARS	.673	.656	.305	1.961
PREEXP	1.903	.701	.007**	6.709
ACCF	2.382	.819	.004**	.092
ACCMR	.933	.728	.200	.393
ACCBUTR	2.237	.697	.001*	9.366
ACCBINF	1.436	.690	.037**	4.206
LANOWN	1.837	.745	.014**	.159
PHINFRA	.338	.961	.725	.713
GOVTSUP	2.284	.853	.007**	.102
TAX	2.066	.681	.002**	7.891

Variable(s) entered on step 1: ACCF, ACCMR, ACCBUTR, LANOWN, PHINFRA, GOVTSUP, TAX, AGE, EDUL, PREEXP, MARS, and ACCBINF
 $-2 \log$ likelihood function = 98.030; $\chi^2 = 57.572$; d.f = 12; constant = -1.483; Cox and Snell R Square = 0.274; Nagelkerke R square = 0.473

Source: survey result, 2020

* $p < 0.01$

** $p < 0.05$

way that reduces the likelihood of failure. Moreover, the result is also consistent with the findings of Berii (2019) who reported that woman with higher education levels were more likely to state positive economic empowerment, and this result suggests that investing in education helps the empowerment of woman in economy.

The regression output revealed that previous entrepreneurial experience is found out to have a positive and significant influence on the performance of women entrepreneurs (Table 4). It is also confirmed by the correlation matrix which revealed that there is a positive relationship between previous entrepreneurial experience and performance of women entrepreneurs (Table 3). This implies that as the experience of an individual firm increases, the firm profitability also increases. This is to mean that older firms are more likely to maximize profit than younger firms because of the social capital they have gathered over time through experience. This finding also accords with the result of Rajan, Muralidharan, and Ravi (2019) and Khaleque (2018) who stated that an enterprise's experience has a significant effect on the performance for the reason that older firms have more experience and a superior financial position to execute their business activities than their counterparts.

Access to finance, on the other hand, is statistically significant and has a positive association with performance of women entrepreneurs as indicated from logit model and correlation matrix (Tables 3 and 4). This implies that women entrepreneurs perform better in their businesses when they have financial accessibility. This means that women-owned enterprises with access to finance have a chance to maximize profit than credit-constrained women-owned enterprises. In line with this, the current study is consistent with the research findings of Wangari (2017) who reported that women entrepreneurs who suffer capital constraints in their initial business investment have lower profits, and their survival rate is lower than those who had adequate capital. On the other side, the finding of this study contradicts with that of Leszczyński (2016) who

stated that successful female business owners relied primarily on their own resources (“Financial capital”) to fund their operational activities and the short- to medium-term growth needs of their firms.

The study confirmed that access to business training is also statistically significant and has a positive association with women entrepreneurs’ performance (Table 4). This indicated that women entrepreneurs perform better in their business when they access business training to develop the relevant skills and knowledge needed to increase business performance. In this context, the current study is consistent with the research findings of Mwania (2015) who reported that access to business trainings is an indicator that had a significant influence on the performance of women in small and medium enterprises.

Access to business information was found to be statistically positive and significantly influence the performance of women entrepreneurs at $p < 0.05$ significant level (Table 4). This implies that women entrepreneurs in MSEs that have access to business information grow faster than their counterparts because using information can improve and strengthen customer relationships, enhance firm image, enhance market linkage, and enable them to compete with other firms. The finding of this study is consistent with that of Mandawa (2016).

The logit model output revealed that land ownership is statistically significant and positively associated with women entrepreneurs’ performance (Table 4). This implies that women entrepreneurs with secured land ownership as a working premise have a chance to maximize profit than their counterparts. Moreover, enterprises having convenient display room and selling premises have a chance of increasing firm profit than their counterparts. The finding of this study is consistent with that of Abdissa and Fitwi (2016) and Awoke (2019).

Government support was also included in the model to see whether or not it is correlated with the performance of women entrepreneurs with special reference to profitability. In this context, evidence of the regression output revealed that government support has a statistically significant influence on the performance of women entrepreneurs and is positively associated with performance as indicated from the correlation matrix (Tables 3 and 4). This implies that women enterprises that have access to government support packages such as devising policies and legal infrastructure, technology, incentives, and giving social recognition have performed better than their counterparts. In this context, the current study is consistent with the research findings of Giday (2017), Kamunge and Tirimba (2014), and Zeb et al. (2019).

In addition to the above discussion, the regression output indicated that levied tax has a positive and statistically significant influence on the performance of women entrepreneurs (Table 4). This implies that women-owned enterprises paying lower taxes are able to increase their performance for a longer period of time than those that pay higher taxes. The finding of this study is consistent with that of Tee et al. (2016) and Atawodi and Ojeka (2012). On the other hand, however, the results of logit model output indicates the absence of statistically significant effect of age, marital status, access to market, and physical infrastructure on the performance of women entrepreneurs though the study conceptualized their influence based on literature.

Conclusion

Considering that entrepreneurship is a key driver for economic growth and development (Mandawa, 2016; Mozumdar et al., 2020; Wangari, 2017), understanding which determinant variables influence the performance of women entrepreneurs appears to be a remarkable phenomenon. In this context, this study provides new empirical evidence on determinants that influence women entrepreneurs' performance based on the data acquired from 180 women entrepreneurs in Gondar city, Northwest Ethiopia, using regression analysis. Consequently, the result of regression output revealed statistically significant evidence of eight explanatory variables out of 12 variables in determining women entrepreneurs' performance in MSEs at 5% significance level. Therefore, educational level, previous entrepreneurial experience, access to business training, access to finance, access to information, access to government support, tax, and land ownership were significant in one hand. But age, marital status, access to market, and physical infrastructure are found to be insignificant variables.

Accordingly, the regression output indicated that enterprises owned and managed by women entrepreneurs with higher formal education experience higher performance in terms of profit than their counterparts. In addition, women entrepreneurs with secured land ownership as a working premise have a chance to maximize profit than their counterparts. In the other context, the finding revealed that women entrepreneurs perform better in their businesses when they have financial accessibility than other financially constrained enterprises. Moreover, the study finding also revealed that women entrepreneurs perform better in their business when they access business training to develop the relevant skills and knowledge needed to increase business performance. Similarly, women entrepreneurs in MSEs having access to business information grow faster than their counterparts because using business information can improve and strengthen customer relationships, enhance firm image, enhance market linkage, and enable them to compete with other firms. With regard to previous entrepreneurial experience, as the experience of an individual firm increases, the firm profitability also increases. Furthermore, the finding revealed that women-owned enterprises that have access to government support packages such as devising policies and legal infrastructure, technology, incentives, and giving social recognition have performed better than their counterparts. In addition, the regression output revealed that women-owned enterprises paying lower taxes are able to increase their performance for a longer period of time than those that pay higher taxes.

The findings of this study, therefore, suggest that women entrepreneurs with lower profit should take actions for better improvement of their performance and their contribution for the city as well as national economy by means of creating strong information exchange with customers and scale up their experience for better performance. With regard to government support, it should encourage the outstanding women entrepreneurs. In addition, providing access to resources like education and training, financial support and technology, devising policies and legal infrastructure, and giving social recognition is the responsibility of the government. Moreover, with regard to finance, micro and small enterprises' policy and strategy suggest microfinance institutions to be the sole providers of saving and credit services to entrepreneurs. Despite this, microfinance institutions by themselves are in limited finance in general. For this reason, the government should reconsider the financial policy and strategy of MSEs as long as finance is cardinal for business operation and expansion.

Limitation and further implication of the study

Ethiopia is one of the developing countries that women entrepreneurs recently are increasing to participate in the business arena. However, their business growth and success were influenced by different factors. Therefore, to identify the factors that influence women entrepreneurs' performance in MSEs in Ethiopia, the researcher could not find sufficient baseline literature on the determinants that influence women entrepreneurs' performance as this can be a limitation of the research. However, there are some studies (Abdissa & Fitwi, 2016; Aemiro, 2019; Gizaw et al., 2019; Hawando, 2017; Meresa, 2018; Meressa, 2020; Tekele, 2019) in Ethiopia which focus on factors affecting the growth and performance of micro and small enterprises. Therefore, lack of related literature on the issue makes it difficult to compare the present result with other similar studies in Ethiopia and the study area in particular. On the other side, even though the study has attained its objective, there are still some limitations. In this context, the study used cross-sectional data for determinants like level of education, previous working experience, age, and profitability of the business. Due to frequent change in these variables, the study may not reflect the dynamics of the data, which would have influence on the conclusions. Another limitation is that the research has only consisted of 180 samples. Such number may not represent the whole population of the entrepreneurs of Ethiopian MSEs. Notwithstanding, the findings of the present study can serve as an input for further research and for policy-makers in developing countries in general and the study area in particular with regard to women entrepreneurs' performance in MSEs.

Abbreviations

MSEs: Micro and small enterprises; TVET: Technical and Vocational Education Training

Acknowledgements

I would like to thank the research participants who lived in Maraki-sub city for their willingness to give information to the research question. I would like to acknowledge Amele for language editorial works and her genuine comments and corrections which helped the paper to be in its present form.

Author's contributions

I have carried out all the whole works of the study. I designed the study research design and carried out the field work, document analysis, literature work, manuscript draft, and editorial. The author, Endalew Terefe, personally undertook this study. The author also read and approved the final manuscript.

Funding

This study was conducted by the author finance only. There is no any financial support from any organization.

Availability of data and materials

The data is included in the manuscript.

Ethics approval and consent to participate

Not applicable since this research did not involve human subject.

Consent for publication

Not applicable.

Competing interests

The author declares that there are no competing interests.

Received: 16 February 2020 Accepted: 31 August 2020

Published online: 07 October 2020

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