## Financial Access to Micro and Small Enterprise Operators: The Case of Youth-Owned Firms in Ethiopia

## Tassew Woldehanna<sup>1</sup>

#### Abstract

The government of Ethiopia has been providing financial access to micro and small enterprises through microfinance institutions. Despite the financial services support given to MSEs, lack of access to finance remains the main business challenge limiting the expansion of the self-employment sector in Ethiopia. This paper aims to study what financial sources are available to MSE operators and examine what factors drive access to credit. Quantitative information was collected from a sample of 909 youth MSE operators and a descriptive and econometric model was applied to examine sources of finance, factors influencing access to loan, and constraints of accessing financial services. Only very few operators (about 8.7%) used borrowing from the formal sector as a source of funding their investment. The result of the study shows that inadequate collateral and difficulties in proving their credit worthiness or absence of credit history were by far the main reasons that discouraged youth MSE operators from submitting applications for bank loans, followed by difficulties in processing loans and the high cost of borrowing. The regression results indicate that age, type of enterprise, and possession of a business plan by the youth MSE owners are significant variables influencing the likelihood of taking a loan. In other words, as age increases, the probability of the MSE operator to take a loan tends to increase. Type of enterprise was found to have a negative effect, indicating that operators in microenterprises have lower probability of taking credits than those engaged in small enterprises. The finding of the study also reveals that the age of the owner, the type of the enterprise, migration status, the location of the business, and the presence of a business plan were statistically significant variables influencing the size of credit accessed by the operators. There is a need for a deliberate intervention and a tailored support program by government and development partners, on the basis of size and gender, to improve financial access to the youth MSE operators without distorting the financial market and ensuring the sustainability of the finance providers.

Key words: Youth owned firms, MSE financing, Ethiopia

JEL Classification: L0, L1, L5, L6

<sup>&</sup>lt;sup>1</sup> Professor of Economics, Addis Ababa University P.O.Box: 170175, E-mail: tassew.woldehanna@aau.edu.et; tassew.woldehanna@gmail.com, Addis Ababa, Ethiopia

#### 1. Introduction

### 1.1 Statement of the problem

Expanding the activities of financial intermediaries in Ethiopia, such as formal banks, deposit-taking microfinance institutions (MFIs), and financial cooperatives, is one of the key tools in implementing the poverty-reduction program, the five-year Growth and Transformation Plan (GTP I), the five-year Micro and Small Enterprises (MSEs) Development Strategy, etc. Two of the objectives of GTP I that were directly related to improving financial access include: (a) expand financial access to 67% by 2014/15, from 20% in 2010/11; and (b) increase the gross domestic savings to the Gross Domestic Product (GDP) ratio from 6% in 2010 to 15% by 2015. Moreover, the mega government projects and other interventions implemented during GTP I were mainly financed from domestic sources (FeMSEDA, 2011).

The MFIs were expected to play a key role in providing financial access to MSE operators and mobilize savings required to finance investments and meet the strategic objectives of the five-year MSE development strategy, which complements the implementation of GTP. They were expected to extend 11 billion Birr loans to 2.2 million MSE operators during the five-year period.

Supporting and promoting Micro and Small Enterprises (MSEs) in Ethiopia has many dimensions and goes beyond making finance available. However, access to finance has been one of the key challenges in expanding the activities of MSE operators, particularly in their early growth and start-up phase, which is aggravated by the problem of information asymmetry and lack of property collateral (Schiffer and Weder, 2001). A lack of information on the credit-worthiness of MSEs raises the cost of gathering information on the part of the lending institutions, which is then passed on to the borrowers. Administrative costs of delivering smaller loans are higher for the formal finance providers such as MFIs compared to banks, which extend larger loans. Moreover, the perception of formal finance providers (that there is a higher risk of lending to MSEs) contributes to the higher interest charged and the excessive collateral required, which, in turn, raises the cost of borrowing for MSEs and limits access to finance. Meeting the collateral requirement of formal finance providers, usually in the form of fixed assets and real estate, is

much more difficult for MSEs compared to larger enterprises. Moreover, given the stretched objective of establishing a huge number of MSEs during the implementation of the five-year (2010/11-2014/15) MSE development strategy, finance providers, particularly Microfinance institutions (MFIs), had limited capacity to meet the required financial resources of MSE operators.

The five-year MSE development strategy and the policy/manual prepared by Federal Micro and Small Enterprise Development Agency (FeMSEDA) (2011) have clearly identified the interventions required to address the growing financial demand of MSEs, particularly in urban areas. Various innovative arrangements, such as establishing credit guarantee schemes with the support of regional governments and establishing the lease finance companies, were made to tackle the collateral requirement hurdle of MFIs. MSE operators that were organized in groups or cooperative forms of organization to start new businesses and those that were capable of saving 15-20% of the loan were given priority to access loans from MFIs without collateral. On top of accessing the various support services (awareness creation programs, skills training, business development services (BDS), market linkages, working premises, extension and mentoring), unemployed individuals, particularly the youth who were interested in selfemployment, were given options to engage in public work projects such as cobblestone road construction in order to save the required 15-20% of the loan size. Municipalities and parents have also actively participated in providing loan guarantee to MFIs on behalf of the MSE operators. The MSE development offices at various levels, the one-stop service centers, Technical and Vocational Education and Training (TVET) institutions, and MFIs were coordinating their efforts to raise awareness and give training for members to acquire marketable skills and develop savings and loan management skills.

Despite the remarkable achievement of MFIs in providing financial services to the MSEs during the five-year MSE development strategy, the demand for loan has been far beyond their capacity. MSE operators identified the lack of financial access as the key challenge in starting new businesses and expanding their existing capacity and capability. On top of insufficient liquidity in the entire financial sector, MFIs have faced a number of challenges including: information asymmetry, which led to moral hazard and adverse selection

problems, lack of property collateral to reduce the risk of lenders, lack of commitment to self-employment and marketable skills (particularly the youth MSE owners), lack of a sustainable and dynamic system to coordinate and provide quality government support services, inadequate capacity of MFIs to provide innovative and quality financial services, etc. Although the above problems have been identified in various government reports and forums, there has been limited effort to collect detailed field-level data and research output to identify the root causes and make evidence-based decisions. Moreover, given the heterogeneous character of MSEs, their specific challenges to gain financial access (disaggregated by size, sector, gender, ownership structure, etc) have not been properly investigated. The limited attention given to research by government, finance providers and other development partners has also contributed to the research gaps on the development of MSEs in Ethiopia. The study aims to examine the factors that influence access and size of loan, and proposes interventions to address the financing challenges of youth-owned MSEs. The study attempts to make a modest contribution to filling the lacuna of research in financing youth MSE owners, which, we believe, can provide research-based recommendations to policymakers, finance providers, youth MSE owners, and other stakeholders so that they can make informed decisions.

## 2. Financial support services to MSE operators

The potential sources of external finance for MSE operators in Ethiopia include the formal, semi-formal, and informal finance providers. The formal finance providers extending financial services to MSEs, which are regulated and supervised by the National Bank of Ethiopia (NBE), include banks falling under the banking law and deposit-taking microfinance institutions (MFIs) established under the microfinance law. Semi-formal financing focuses on the delivery of financial services through the cooperatives, particularly the financial cooperatives or the savings and credit cooperatives (SACCOs), which are regulated on the basis of the general cooperative law and supervised by the Federal Cooperative Agency (FCA) and regional cooperatives development bureaus/agencies. On the other hand, informal financing involves the delivery of credit through Iqub's, Idir's, relatives and friends, supplier credit, traders, moneylenders, etc.

Expanding the activities of financial intermediaries in Ethiopia such as formal banks, MFIs and financial cooperatives was one of the strategic approaches in implementing the poverty-reduction program, the first five-year Growth and Transformation Plan (GTP-I), and the MSE development strategy of the country. Two of the objectives of GTP I were directly related to improving financial access to the excluded population: (a) expand financial access to 67% by 2014/15, from 20% in 2010/11; and (b) increase the Gross Domestic Savings to GDP ratio from 6% in 2010 to 15% by 2015. Moreover, the large government projects and infrastructure development implemented during GTP I were mainly financed from domestic sources or savings.

#### The responsibility of MFIs in the MSE development strategy

MFIs are expected to focus on providing financial services, particularly loans, to MSE operators by mobilizing domestic savings from the public and to meet the strategic objectives and targets of the first five-year MSE development strategy, which complements the implementation of GTP I. As per the MSE strategy, MFIs are anticipated to extend 11 billion Birr of loan to 2.2 million MSE operators (FEMSEDA, 2011). They are also expected to: (a) develop financial products that match the financial needs of MSE operators; (b) assist MSE operators to develop the culture of saving; (c) provide loans to MSE operators; (d) learn from best practices of other MIFs from the rest of the world and customize them to meet the needs of MSE operators; and (e) document and scale up the good practices of MSE operators by regularly evaluating their operational and financial performance. The National Bank of Ethiopia (NBE) and the Association of Ethiopian Microfinance Institutions (AEMFI), in collaboration with the Civil Service College, were given the responsibility of building the capacity of MFIs. However, despite the huge efforts made by MFIs during the implementation of the first five-year MSE development strategy, the Ministry of Urban Development and Construction, the Ministry of Finance, the Federal Micro and Small Enterprise Development Agency, NBE, and the board of AEMFI had reported serious concerns on the current growth and capacity of the MFIs in meeting the strategic targets of GTP I and the MSE strategy. On the other hand, the Commercial Bank of Ethiopia (CBE) and the Development Bank of Ethiopia (DBE) were given the task of delivering loans to medium-level enterprises only. The specific responsibilities of MFIs, which are stipulated in the five-year MSE development strategy, and the savings and credit policy/manual of MFIs prepared by FeMSEDA (2011) include the following:

- (i) Since saving is a precondition to access loan, MFIs should enhance their savings mobilization capacity and culture of the MSE operators. Similarly, MSE development agencies/bureaus/offices at various levels and TVETs are given the task of improving the saving culture of MSE operators in order to benefit from government support services and other development projects. MSEs engaged in growth-oriented or priority sectors are expected to save 20% of the loan size before accessing loan from MFIs, while those MSEs in the export sector are required to save 15% of the loan size. Government structures at various levels are also given the responsibility of supporting MSE operators by giving them the opportunity to engage in public works in order to save the required amount before accessing loan from MFIs and engaging in selfemployment. The MSE operators are required to save continuously for 6 months before accessing loans from MFIs. However, the mandatory savings requirement of MSEs varies with the stage of development within micro or small enterprises (startup, growing, and mature). There is a mandatory deposit requirement of MFIs (2% of the loan) for all MSE operators who took loans until the end of the loan period. MFIs were expected to develop innovative savings products and encourage families/parents to assist their children, particularly those who graduate from TVETs and universities, in meeting the required pre-loan savings.
- (ii) MFIs should provide a credit that matches the diverse business needs which depend on the growth level of MSEs and the loan ceiling allocated for each sub-sector. Considering their social responsibility, MFIs are also expected to extend loans on the basis of fair and affordable interest rates through the one-stop service delivery centers. However, an MSE operator has to meet the following criteria to access loan: saving regularly as per the credit and savings manual of MFIs, producing a viable business plan, being above 18 years of age, producing a competency certificate (if needed), using a standard financial or bookkeeping system, providing an audited financial statement, and agreeing to share the cost of audit services (if needed). If women are organized in groups, cooperatives, share

companies, or operate on an individual basis and meet the above criteria; they will be given priority to access loans from MFIs. Moreover, the youth who have graduated from various higher educational institutions, including TVETs, and have new and innovative project ideas and technologies can access credit from MFIs without collateral. Although the government gives priority to MSE operators organized in groups, cooperatives, and share companies to access government support services, individuals who are sole owners of enterprises can also access the support services, including finance.

- (iii) Although there are loan size limits for each sub-sector clearly stipulated in the savings and credit policy of MFIs, the loan size for an MSE operator is determined on the basis of a viable business plan. The payback period in the business plan should be decided on the basis of the probation period and type of the business. However, the payback/refund period of the loan to MSEs shall not exceed 36 months. MFIs are also expected to provide input in the preparation of viable business plans and educate the MSE operators on how to use the loan efficiently. Although a maximum of four months is given as a grace period to MSEs, operators who repay their loan every year and those who repay their loans every six or four months cannot enjoy this privilege. The repayment rate of MSEs should be 100% and if the average repayment rate is below 97%, the MFI should give up extending loans in the given town or branch. MFIs, in collaboration with government MSE support service providers, are responsible for pre- and post-loan follow-ups in order to minimize loan diversion and use the loan for the intended purpose.
- (iv) Given the insufficient liquidity in the MFIs, priority is given to finance growth-oriented MSEs, which include enterprises that produce for the export market and substituting imports, those that engage in construction, those that serve as models and produce and give services in a cluster, those that have adequate deposits and save regularly, and those that have good track records and pay taxes. The priority sectors are also categorized into: manufacturing, construction, trade, service, and urban agriculture.

- (v) Delivering financial education to potential and existing MSE operators is the task of all stakeholders including the MSE development agencies at various levels, TVETs, Ministry of Education, NBE, media, and finance providers. However, MFIs should play a critical role in promoting the saving culture of the MSE operators and assist them on how to manage their financial resources properly.
- (vi) Many of the MSEs have a serious challenge in meeting the property collateral requirement of MFIs. To address this issue, the MSE development strategy and the savings and credit policy manual identifies different types of credit guarantee options (substituting the property collateral requirement) for borrowers that have regularly saved 20 to 15% of the loan amount from their own sources before the disbursement of the loan. The alternative options include: credit guarantee fund (established by the regional government and MFI); group guarantee; institutional guarantee by city and Woreda administration; family guarantee; tripartite guarantee or guarantee arrangement among the three parties (supplier, MFI and MSE operator); third-party guarantee by a salaried person; and warehouse receipts. MFIs also provide loans for selected MSEs with new and innovative business ideas without collateral (clean loan) on the basis of a viable business plan. Credit can also be extended to growth-oriented MSEs without collateral through the guarantee scheme established by the regional governments and MFIs after meeting the 15% saving requirement. On top of the mandatory credit life insurance, MSE operators are also expected to insure their property collateral before accessing the loan.

## Capacity building support to MFIs

Implementing the huge task of delivering financial services to about 2.2 million MSE operators requires building the institutional and financial capacity of the MFIs. The NBE is given the responsibility of creating a conducive regulatory environment to promote an efficient delivery of financial services through MFIs, analyze best experiences, disseminate information, follow up financial performance, and build their institutional capacity. The following capacity building interventions are stipulated in the MSE development strategy to support MFIs:

- provide continuous training to the staff of MFIs (from board member to loan officer level) in order to meet attitudinal and skills gaps;
- create awareness, deliver training and implement financial education programs in order to mobilize savings from the public;
- develop incentive schemes for MSE operators in order to meet the 15-20% mandatory saving requirement of MFIs before accessing loan; and
- provide technical training to senior professionals of MFIs and upgrade their knowledge and skills. To this end, the Ethiopian Civil Service College was singled out as the core MFI training provider, particularly for the senior professionals.

# Establishing credit guarantee schemes by regional government-supported MFIs

A credit guarantee scheme is an instrument to enhance access to credit to targeted MSE operators and mitigate/reduce the risk of default. In other words, the credit guarantee schemes are used to substitute the property collateral requirements of MFIs. The credit guarantee schemes aim at increasing the lender's interest in the MSE sector and encourage the learning process through which the MFIs in Ethiopia can develop the expertise of lending to MSE operators without requiring property collateral. This will, at the end, shift the burden of debt monitoring from lenders to the guarantors.

According to the MSE strategy and the savings and credit policy of MFIs, the credit guarantee scheme is established through funds allocated by the MFIs and respective regional governments. The regional government, MSE operators, and MFIs are expected to contribute 70%, 20% and 10% of the credit guarantee fund, respectively. The credit guarantee scheme is intended to cover both financial loan and lease finance. The fund is expected to be transferred within one month after the beginning of the fiscal year, subject to renewal every year. The fund is deposited in a blocked account of an MFI. However, the MFI is expected to pay 5% interest rate on the balance of the fund. The MSE operators shall agree to pay a service fee of 1.5% in order to sustain the credit guarantee scheme. Although start-up enterprises have the opportunity to get full guarantee coverage after meeting the 20% regular saving requirement to access the credit guarantee facility, enterprises involved in export product and growth-oriented sectors shall only save 15% of the loan

size to benefit from the scheme. Other types of enterprises (with the exception of growth-oriented and exporting MSEs) are expected to produce alternative collateral to access loan from MFIs. Implementing the credit guarantee fund and follow-up on the proper utilization of the resources require developing an independent institution or facility in each region. However, instead of being managed by an independent institution, the credit guarantee schemes established by regional governments and MFIs are entirely managed by the MFIs themselves. The schemes are currently used as means of addressing liquidity challenges of the MFIs. As a result, the credit guarantee schemes did not meet the expectations of the strategy.

# Establishing a lease service delivery system for machines and investment materials

Financial lease products are intended to help MSE operators who have problems in meeting the collateral requirement of MFIs own machinery and other investment materials. Initially, the strategy gave the responsibility of establishing a finance lease company to the CBE, while MFIs take the task of implementing the leasing services. Metal Engineering Corporation and other private firms are expected to support the implementation of the machinery and investment materials leasing program. However, the establishment of a lease company by the CBE was abandoned and the responsibility was shifted to the regional governments and MFIs. Currently, five lease companies are established in four regional states and Addis Ababa city administration. MSE operators who saved 40% for at least two years can access 60% of the loan requested from banks. The maximum repayment period for the loan is 3 years. Although the interest rates of the loan and the savings are to be determined by the NBE, considering the inflation rate, the strategy proposes 7.5% interest rate for the 60% loan and 5.5% interest on the savings of the MSE operators.

#### 3. Data and the Econometric Model

#### 3.1 Data

Both secondary and primary data were collected to analyze the financial access challenges of youth MSE operators in Ethiopia. The secondary data were gathered through desk review: assessment of the implementation of government policies such as the MSE development strategy and GTP I and reviewing the relevant theory and empirical studies of financing MSEs. The primary data were collected through: (i) key informant interviews with policymakers and expert opinion interviews (executive managers of MFIs and MSE promoters) and focus group discussions, (ii) quantitative national-level survey of existing youth-owned MSE operators administered using structured questionnaire; and (iii) qualitative survey to complement the quantitative survey findings. The quantitative survey of the study was mainly based on a total sample of 909 youth-owned MSEs in Ethiopia selected using stratified simple random sampling. Since the objective and focus of the study was to assess the performance and challenges of the youth MSE owners in accessing financial services, attempts were made to stratify the sample into size (micro and small enterprises), gender (male and female owners) and enterprise type (manufacturing, construction, urban agriculture, service and trade). The 909 sample youth MSE owners, between the ages of 18 and 34, were selected from five regional states (Oromia, Amhara, SNNPR, Tigray and Harari), and two city administrations (Addis Ababa and Dire Dawa). Out of the total sample of youth-owned MSEs, 543 were micro while the remaining 366 were small enterprise owners<sup>2</sup>. To adequately understand and study the gender dimension, 210 women and 361 male owners were randomly sampled, while the remaining 341 sampled MSEs were owned by both male and female operators (mixed gender).

\_

<sup>&</sup>lt;sup>2</sup> As per Ethiopia's five-year MSE Development Strategy (2011), microenterprises are firms which have up to 5 employees (including the owner or family) and their total assets are less than or equal to 100,000 Birr for the industrial sector and less than or equal to 50,000 Birr for the service sector. On the other hand, small enterprises are firms which have between 6-30 workers and their total assets are between 100,001 Birr - 1,500,000 Birr for the industrial sector and between 100,001 Birr - 500,000 Birr for the service sector.

## 3.2 Descriptive statistics

Youth MSE owners require finance to buy machinery and equipment, cover operation costs, expand business and optimally utilize available opportunities, which are generated mainly through internal resources (savings and retained earnings) and to a lesser extent from external sources. During the start-up phase, youth MSE operators mainly use their own financial resources and then gradually move to debt financing and/or venture and equity capital. The external sources include explicit borrowing from formal and informal sources, security finance, implicit borrowing in the form of account payable (i.e. trade credit and advances from clients), hire purchase<sup>3</sup>, and lease finance. Access to external finance (debt financing) depends largely on the development of the financial markets, the regulatory environment and support programs, the ability of the finance providers to assess and manage, and the risks associated with lending to MSEs. In the Ethiopian context, the potential sources of external finance include: formal banks, MFIs, cooperatives, government projects, and semiformal and informal lenders. Given the limited financial access from formal financial institutions, MSE operators would revert to informal finance providers such as friends and relatives, Iqubs, moneylenders, etc.

#### 3.2.1 Access to credit

About 56% of the youth MSE owners in the sample survey accessed loan from either formal or informal sources, while the remaining 44% didn't borrow from any source (Table 1). Of those that borrowed, about 20.9% and 1.6% of the respondents said that they borrowed from MFIs and banks, respectively, while about 6.7% obtained loan from savings and credit associations (SACCOs). Similarly, 6.1% of youth MSE owners responded that they accessed loan from suppliers while about 15.4% borrowed from friends and relatives. Though Iqub is a widely used informal way of financing in Ethiopia, the study finds that less than 1% of MSE operators used Iqub as a source of credit. A relatively significant number of small enterprise owners (30.3%) borrowed from MFIs compared to microenterprise owners (14.6%). However, a higher proportion of the microenterprise owners (19%) borrowed from

2

<sup>&</sup>lt;sup>3</sup> A hire purchase is a practice of buying goods through installment base payments system.

relatives and friends compared to small enterprise owners (11.2%). Unlike the results of this survey, Gebrehiwot and Wolday (2004) found that, out of the respondents who accessed credit, about 10.5% and 5% of the MSE operators borrowed from banks and MFIs, respectively. Moreover, the proportion of MSEs who received credit from friends and relatives was 27.2%, followed by suppliers' credit (14.9%), and loan from Iqubs (12.6%). Although it is difficult to compare the two surveys, the findings of this study are consistent with the objectives and targets of the first five-year MSE development strategy, where the entire responsibility of financing MSEs was given to MFIs.

Table 1: Access to credit from different institutions and individuals, by gender and type of enterprise (%)

| Source                        |        | Mi    | icro  |           |        |       | MSEs  |       |       |
|-------------------------------|--------|-------|-------|-----------|--------|-------|-------|-------|-------|
| Source                        | Female | Male  | Mixed | Total     | Female | Male  | Mixed | Total | MISES |
| Formal banks                  | 0.65   | 0.79  | 1.49  | 0.92      | 1.75   | 4.67  | 1.49  | 2.47  | 1.55  |
| Microfinance institutions     | 13.07  | 14.84 | 15.67 | 14.5<br>5 | 31.58  | 28.04 | 31.19 | 30.33 | 20.9  |
| Government projects           | 1.96   | 0     | 1.49  | 0.92      | 1.75   | 1.87  | 2.97  | 2.46  | 1.54  |
| NGOs                          | 1.96   | 0.78  | 2.99  | 1.66      | 15.79  | 0     | 1.49  | 3.28  | 2.31  |
| Iqubs                         | 1.31   | 0.39  | 0     | 0.55      | 0      | 1.87  | 0.99  | 1.09  | 0.77  |
| Moneylenders                  | 0      | 0.39  | 0     | 0.18      | 0      | 0.93  | 1.98  | 1.37  | 0.66  |
| Suppliers                     | 3.27   | 5.08  | 7.46  | 5.16      | 7.02   | 13.08 | 4.46  | 7.38  | 6.05  |
| Savings & Credit associations | 4.58   | 1.17  | 9.7   | 4.24      | 5.26   | 8.41  | 12.87 | 10.38 | 6.71  |
| Friends/relatives             | 18.95  | 20.7  | 12.69 | 18.2      | 12.28  | 13.08 | 9.9   | 11.20 | 15.4  |

**Source:** AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

The results of Wolday *et al.* (2013) show that small-sized firms used both formal and informal loans on a sporadic basis. However, credit extended through commercial banks was mainly channeled to larger businesses, while MFIs were providing financial services to small and microenterprise operators, which matched the objectives of the MSE development strategy.

#### 3.2.2 Accessing loan from banks and MFIs

One of the indicators of financial inclusion in a country is for everyone to be able to open an account in formal financial institutions. When the respondents were asked whether they had a bank/MFI account or not, about 74.6% replied that they had a bank account while the remaining 25.4% didn't have an account (Table 2). However, a higher proportion of the small enterprise owners (81.2%) had bank accounts compared to the microenterprise operators (70.2%). The proportion of male MSE owners who had a bank account was higher than their female counter part. Although about 36.5% of the youth MSE owners had accounts in MFIs, the proportion of youth small enterprise owners who had accounts in MFIs (43.4%) was relatively higher compared to that of microenterprise operators (31.7%). On the other hand, the CEOs of MFIs who were interviewed during the survey indicated that the youth MSE owners had developed a wrong perception, i.e., if they save a significant amount of cash in MFIs, the institution may prevent them from accessing the next loan. As a result, many of the MSE operators tend to deposit the mandatory savings required to access loans in MFIs and use banks to deposit the rest of their liquid cash.

Table 2: Respondents who had bank and MFI accounts

|                              |                | Micro   |         |         |         | Sn     | ıall   |        | le le        |
|------------------------------|----------------|---------|---------|---------|---------|--------|--------|--------|--------------|
| Had account in a bank or MFI | Female         | Male    | Mixed   | Total   | Female  | Male   | Mixed  | Total  | Whole sample |
| Bank account                 | - <del>-</del> |         |         |         | -       |        |        |        |              |
| Had bank account             | 61.44          | 75.39   | 70.15   | 70.17   | 75.44   | 80.37  | 83.17  | 81.15  | 74.59        |
| Didn't have bank a/t         | 38.56          | 24.61   | 29.85   | 29.83   | 24.56   | 19.63  | 16.83  | 18.85  | 25.41        |
| Total 10                     | 0.00 10        | 0.00 10 | 00.00 1 | 00.00 1 | 00.00 1 | 00.00  | 100.00 | 100.00 | 100.00       |
| MFI account                  |                |         |         |         |         |        |        |        |              |
| Had MFI account              | 28.1           | 31.25   | 37.31   | 31.86   | 42.11   | 38.32  | 46.53  | 43.44  | 36.52        |
| Didn't have MFI account      | 71.9           | 68.75   | 62.69   | 68.14   | 57.89   | 61.68  | 53.47  | 56.56  | 63.48        |
| Total                        | 100.00         | 100.00  | 100.00  | 100.00  | 100.00  | 100.00 | 100.00 | 100.00 | 100.00       |

Source: AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

Theoretically, one may have never accessed a bank loan for either of two reasons: He/She never applied to borrow or was rejected. The youth MSE owners were asked whether they had ever applied for a bank loan, and if not, why not. The results of the survey show that only 4.5% of the respondents applied for a bank loan, but only 1.6 % of them managed to borrow from banks. On the other hand, the proportion of small enterprise owners who

applied for a bank loan (6.3%) was relatively higher compared to that of microenterprise owners (3.3%). The proportion of female MSE owners who applied for a bank loan was lower compared to that of their male counterparts.

When the youth MSE operators who did not apply for bank loans were asked to indicate their reasons, about 19% of them said they didn't need taking credit from banks, while the remaining 81% reported they were discouraged from applying due to real or perceived problems (Table 3). Inadequate collateral was by far the main reason discouraging the respondents from applying for a bank loan, followed by difficulties in loan processing, and high borrowing cost. These problems were more challenging for microenterprise operators compared to small enterprise owners. On top of the above reasons, fear of failing to repay the loan and getting indebted was another factor that discouraged female microenterprise owners from applying to access a bank loan.

Table 3: Reasons for not applying for bank loans, by percentage of respondent MSEs

| Decree for not applying                     |       | Mi    | icro  |       |        | Sn    | nall  |       | ole<br>ple |
|---|-------|-------|-------|-------|--------|-------|-------|-------|------------|
| Reason for not applying-                    | emale | Male  | Mixed | Total | Female | Male  | Mixed | Total | Whole      |
| Did not need any credit                     | 18.3  | 20.7  | 17.91 | 19.34 | 14.04  | 20.56 | 18.81 | 18.58 | 19.03      |
| Do not know where to go                     | 9.15  | 7.42  | 9.7   | 8.47  | 8.77   | 5.61  | 7.43  | 7.1   | 7.92       |
| Inadequate collateral                       | 63.4  | 65.23 | 57.46 | 62.8  | 68.42  | 57.94 | 59.41 | 60.38 | 61.83      |
| Do not want to incur debt                   | 13.07 | 8.59  | 6.72  | 9.39  | 3.51   | 9.35  | 6.44  | 6.83  | 8.36       |
| Borrowing process is too bureaucratic       | 41.18 | 42.58 | 47.76 | 43.46 | 29.82  | 28.97 | 34.65 | 32.24 | 38.94      |
| Did not think I would get one               | 12.42 | 8.59  | 8.96  | 9.76  | 5.26   | 5.61  | 7.43  | 6.56  | 8.47       |
| Interest and other costs too high           | 20.26 | 13.67 | 22.39 | 17.68 | 19.3   | 11.21 | 17.82 | 16.12 | 17.05      |
| Afraid I may not be able to repay           | 16.99 | 9.38  | 6.72  | 10.87 | 5.26   | 2.8   | 5.45  | 4.64  | 8.36       |
| Already heavily indebted                    | 4.58  | 2.73  | 2.24  | 3.13  | 0      | 0     | 2.48  | 1.37  | 2.42       |
| Already have easy access from other sources | 5.23  | 3.13  | 6.72  | 4.6   | 0      | 3.74  | 10.4  | 6.83  | 5.5        |
| Other reasons                               | 4.58  | 2.73  | 2.99  | 3.31  | 0      | 0.93  | 2.48  | 1.64  | 2.64       |

Source: AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

According to the MSE development strategy, MFIs in Ethiopia are given the responsibility of extending loans to MSE operators, particularly to those excluded from the services of commercial banks. The result of the study shows that about 25.2% of the youth-owned MSEs have submitted their application for a loan from MFIs, while about 66.3% didn't apply for a loan. The proportion of small enterprise owners who applied for an MFI loan (30.6%) was relatively higher compared to that of microenterprise operators (21.6%). The number of female MSE owners who had applied for an MFI loan was lower compared to that of their male counterparts.

Table 4: Reasons for not applying for a loan from MFI, by percentage of respondent MSEs

| Decree for set                        |        | Mic   | ro    |       |         | Small       |        | ole<br>ole   |
|---------------------------------------|--------|-------|-------|-------|---------|-------------|--------|--------------|
| Reason for not applying               | Female | Male  | Mixed | Total | Female  | Male Mixed  | Total  | Whole sample |
| Did not need any credit               | 21.74  | 24.60 | 19.35 | 22.53 | 16.67   | 34.38 28.97 | 28.50  | 24.58        |
| Do not know where to go               | 7.02   | 10.16 | 6.45  | 8.38  | 3 11.11 | 9.38 12.26  | 11.17  | 9.33         |
| Inadequate collateral                 | 53.51  | 55.08 | 56.99 | 55.08 | 50.00   | 42.19 45.28 | 45.15  | 51.67        |
| Do not want to incur debt             | 13.04  | 10.16 | 7.53  | 10.38 | 8.33    | 12.50 7.55  | 9.22   | 9.98         |
| Borrowing process is too bureaucratic | 40.35  | 44.39 | 49.46 | 44.42 | 2 30.56 | 40.63 36.79 | 36.89  | 41.83        |
| Did not think I would get one         | 7.02   | 9.63  | 7.53  | 8.38  | 5.56    | 12.50 6.60  | 8.25   | 8.33         |
| Interest and other costs too high     | 21.74  | 16.04 | 29.03 | 20.76 | 30.56   | 18.75 20.75 | 21.84  | 21.13        |
| Afraid I may not be able to repay     | 18.42  | 9.09  | 6.45  | 11.17 | 5.56    | 4.69 5.66   | 100.94 | 9.17         |
| Already heavily indebted              | 4.39   | 1.60  | 3.23  | 2.79  | 8.33    | 3.13 0.94   | 2.91   | 2.83         |
| Other reasons                         | 6.03   | 5.85  | 3.23  | 5.29  | 2.70    | 4.69 5.61   | 4.81   | 5.12         |

Source: AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

When the youth MSE owners who did not take MFI loans were asked to indicate the main reasons for not doing so, about 24.6% of the respondents

reported that they didn't need an MFI loan (Table 4). Property collateral requirement was the most frequent reason reported by MSE operators for not applying for an MFI loan, followed by difficulties in loan processing, and high borrowing cost. On top of the above reasons, female microenterprise owners reported that fear of default and getting indebted discouraged them from applying for an MFI loan. Interestingly, the proportion of small enterprise owners who didn't apply for an MFI loan was relatively higher compared to that of microenterprise operators.

#### 3.2.3 Accessing loan from the informal lenders

Whenever the MSE operators have real or perceived difficulties in accessing loans from formal financial institutions such as banks and MFIs, they tend to switch to the informal lenders. The informal lenders in Ethiopia have been successful in providing loans that meet the diverse needs of MSEs. They enable borrowers to access loans quickly, with few transaction costs (without a lengthy appraisal process, little or no paper work or travel, and clear and simple terms of transaction which is easy to understand) and a flexible collateral requirement. However, the proportion of male MSE owners who looked for a loan from informal lenders was higher compared to that of female MSE owners. When the youth MSE owners who took a loan from informal lenders, were asked to indicate (in order of importance) the reasons for doing so, half of the respondents reported simplicity in loan processing (i.e. little or no formality involved) as the main reason for taking the loan from informal lenders, followed by little or no collateral requirement (29.4%) (Table 5).

Table 5: The primary reasons for taking loans from the informal sector

| Primary                                   |        | Mic   | cro   |       |        |       | e<br>le |       |              |
|---|--------|-------|-------|-------|--------|-------|---------|-------|--------------|
| reasons                                   | Female | Male  | Mixed | Total | Female | Male  | Mixed   | Total | Whole sample |
| More favorable interest rate              | 3.57   | 5.66  | 0.00  | 3.88  | 16.67  | 4.76  | 3.33    | 5.26  | 4.38         |
| Simple process (little or no formalities) | 53.57  | 43.40 | 59.09 | 49.51 | 50.00  | 42.86 | 56.67   | 50.88 | 50.00        |
| Little or no collateral requirement       | 32.14  | 26.42 | 31.82 | 29.13 | 33.33  | 38.10 | 23.33   | 29.82 | 29.38        |
| Flexible                                  | 7.14   | 3.77  | 4.55  | 4.85  | 0.00   | 4.76  | 0.00    | 1.75  | 3.75         |

| payback<br>arrangement<br>Easy access |        |        |        |        |        |        |        |        |        |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| (available                            | 3.57   | 13.21  | 4.55   | 8.74   | 0.00   | 4.76   | 10.00  | 7.02   | 8.13   |
| locally)                              |        |        |        |        |        |        |        |        |        |
| Limited or no                         |        |        |        |        |        |        |        |        |        |
| access to                             | 0.00   | 7.55   | 0.00   | 3.88   | 0.00   | 4.76   | 6.67   | 5.26   | 4.38   |
| Formal sources                        | 0.00   | 1.55   | 0.00   | 3.00   | 0.00   | 4.70   | 0.07   | 3.20   | 7.50   |
| of credit                             |        |        |        |        |        |        |        |        |        |
| Total                                 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

**Source:** AEMFI, Survey on Youth-owned MSE in Ethiopia (2014).

#### 3.2.4 Saving behavior of MSEs

Saving is fundamentally about choosing between current and future consumption. In other words, it is an issue of allocating resource between the current and future periods. It is instrumental in transforming small cash-flow MSE operators into useful large ones. Saving is a precautionary balancing tool against economic shocks the MSE owners may suffer; it maintains a smooth consumption in the face of volatile income; it supports investment, builds up cash collateral, and serves as a track record to allow them to have access to credit from formal finance providers. Although saving is directly related to investment and economic growth, the savings to GDP ratio in Ethiopia was very low (only 6%) in 2010/11 and increased significantly to 21% in 2015. Attaining the above increase in savings during the GTP period required significant concerted efforts of financial intermediaries and the government at various levels.

During the early stages of development of MFIs in Ethiopia, much of their expansion was focused on providing small loans to the rural population and most of the loan funds were obtained from sources outside the MFIs: loans from banks, subsidized funds from government and donor projects and donations, and later loans from the Rural Financial Intermediation Program (RUFIP) and bank loans. However, these sources of funds have been unsustainable and have been drying up, particularly in the last five years. To this end, the five-year MSE development strategy (2010/11-2014/15) stipulates that MFIs should provide credit to the tune of Birr 11 billion to 2.2 million MSE operators during GTP I and 80% of this loan provision was

expected to be attained through mobilizing savings from the public. Despite the growth of commercial banks and MFI activities (in terms of outreach and performance), they had a serious challenge of meeting the growing demand for loans in the economy.

The MSE development strategy clearly indicates the need to significantly improve the saving behavior of the youth engaged in MSEs (new and existing). Individuals who intend to start a new business and access loans from MFIs and government support services were expected to save about 15% - 20% of the loan amount. MFIs, MSE support service providers, and other stakeholders were given the responsibility of developing appropriate saving products and provide financial education to MSE operators to develop saving culture. However, according to the survey results in Table 6, many of the youth MSE owners preferred to save in banks, MFIs, and Iqubs in that order. The proportion of small enterprise owners who reported cash saving in banks, MFIs, and Iqub was higher compared to that of microenterprise operators. Although the proportion of women MSE operators who saved in banks and MFIs was lower than that of their male counterparts, women owners preferred saving through Iqubs. Moreover, there were many respondents who preferred to save at home and use SACCOs facilities.

Table 6: Institutions and places where MSE owners put their cash savings

| Institutions and          |       | Micro  |       |         |       | Small  |       |         |       |  |
|---------------------------|-------|--------|-------|---------|-------|--------|-------|---------|-------|--|
| other<br>mechanisms       | Femal | e Male | Mixed | d Total | Femal | e Male | Mixed | d Total | Whole |  |
| Bank                      | 50.98 | 67.19  | 58.96 | 60.59   | 64.91 | 71.03  | 76.73 | 73.22   | 65.68 |  |
| MFI                       | 25.49 | 28.52  | 32.84 | 28.73   | 38.60 | 37.38  | 43.56 | 40.98   | 33.66 |  |
| Saving and Credit         |       |        |       |         |       |        |       |         |       |  |
| Cooperatives              | 9.80  | 8.20   | 24.63 | 12.71   | 10.53 | 9.35   | 15.35 | 12.84   | 12.76 |  |
| (SACCOs)                  |       |        |       |         |       |        |       |         |       |  |
| Iqub                      | 32.03 | 28.13  | 22.39 | 27.81   | 40.35 | 33.64  | 25.25 | 30.05   | 28.71 |  |
| Home                      | 20.26 | 18.75  | 16.42 | 18.60   | 8.77  | 13.08  | 11.39 | 11.48   | 15.73 |  |
| Other informal mechanisms | 0.00  | 0.78   | 0.00  | 0.37    | 1.75  | 0.00   | 0.50  | 0.55    | 0.44  |  |
| In-kind saving            | 3.27  | 5.08   | 9.70  | 5.71    | 7.02  | 6.54   | 6.44  | 6.56    | 6.05  |  |

Source: AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

The average outstanding cash saving of youth-owned MSEs was computed by only considering those operators who had cash balances, i.e., excluding those with zero outstanding cash balance. The results show that average outstanding bank deposits of respondents were, by far, the highest (Birr 22,657.6), followed by saving through Iqubs (Birr 9,456.2), and in MFIs (Birr 6,024.8). The average outstanding cash savings in SACCOs and at home were Birr 2,217.8and Birr 1,107.4, respectively. The cash savings of microenterprise operators were much lower compared to those of the small enterprise owners, while the average savings of women microenterprise owners were lower compared to those of male operators. However, the bank and MFI deposits of women MSE owners were higher compared to those of the male MSE owners, while their savings in SACCOs and Iqubs were lower.

Training and awareness creation programs were key support services provided to efficiently manage financial resources and improve the saving culture of MSE operators. According to the survey findings, about 34.5% of the youth MSE owners received training on saving and financial management. While about 46.2% of the small enterprise owners participated in the training and awareness creation programs delivered through the government support program, only 26.7% of microenterprise owners participated in the training and awareness creation programs. Surprisingly, female MSE owners had higher opportunities to frequently attend the training and awareness creation program compared to their male counterparts.

## 3.3 Econometric Strategy

## 3.3.1 Model specification

The relationship between financial access and owners' attributes, firm-level characteristics, and policy and institutional factors is more formally analyzed using econometrics in which access to credit is a dependent variable and the various characteristics of the youth MSE owners, including inter-firm cooperation and policy variables, are independent variables. The objective is to examine the probability of making the decision to take credit and identify the factors influencing the amount of credit accessed by the respondents (if the youth MSE owners decided to take loan). Analyzing the factors behind accessing loan starts by specifying the econometric model and variables used.

Access to credit varies among the sample youth MSE owners; it is positive and distributed continuously. One of the core objectives of this study is to examine the causes that trigger differences in accessing credit and analyze the factors that determine the amount of credit among individual MSE owners. Yet, it is common to see a substantial number of MSE owners without any credit access. Thus, credit access becomes a limited dependent variable that would be explained by variables expected to affect it. This situation leads to a choice problem in terms of both sample size and estimation method. The choice of whether to use the whole sample size (including those MSE operators with zero access to credit) or only the observations with positive credit levels should be made. Using only the positive levels will result in a selection bias because the subset of the sample is excluded. On the other hand, using the whole sample would result in having substantial observations with zero values, where OLS is not the appropriate method of regression.

A method suggested in the above scenario is using the Tobit model (Tobin, 1958), which assumes normal distribution of the error terms and uses MLE. Yet, another method that is used in this setup is the Heckman two-stage method of estimation. This has the advantage of using two levels of decisions and takes care of the two possible selection biases that could emerge in such circumstances. According to Heckman (1979), sample selection bias may arise either because there might be self-selection by individuals or data units being investigated, or there might be sample selection decisions by analysts or data processors operating in a similar fashion as self-selection. In the simplest setting, observing positive amounts of loan for an individual must have passed two decision stages. In the first stage, one has to decide whether to take a loan or not. In the second stage, given that MSE owners have decided to take a loan, they will need to decide how much they would borrow.

The Heckman selection model assumes that there exists an underlying regression relationship. The model has a dichotomous variable  $Y_{1\ell}$  and a limited dependent variable (in our case, access to credit)  $Y_{2\ell}$ . Both  $Y_{1\ell}$  and  $Y_{2\ell}$  are driven by a latent variable  $Y_{2\ell}^*$  as follows:

<sup>&</sup>lt;sup>4</sup> This is of interest not only from the academic and/or positive point of view but would have normative content that is helpful in designing policies that help bring about desired outcomes.

$$Y_{1i} = \mathbf{Z}_i \boldsymbol{\alpha} + \epsilon_i \tag{1}, \text{ with}$$

$$Y_{1i} = 1ifY_{2i}^* > 0$$
 (2), and

$$Y_{1i} = 0ifY_{2i}^* \le 0 (3)$$

where,  $\epsilon_i$ , i = 1, ...n are assumed to be iid,  $Z_i$  is a vector of explanatory variables that are hypothesized to determine the decision to take credit, and is a vector of parameters of interest. Next we have:

$$Y_{2i} = X_i \hat{\beta} + v_i \tag{4}, \text{ with}$$

$$Y_{2i} = Y_{2i}^* \text{if} Y_{1i}^* > 0$$
 (5), and

$$Y_{2i} = 0 \text{if} Y_{1i}^* \le 0 \tag{6}$$

where,  $v_i$ , i = 1, ...n are the error terms associated with equation 4,  $X_i$  is a vector of variables estimated. The procedure followed in estimating the parameters of interest in equation is as follows: first estimate equation 1 using a Probit (a result of our imposition of the assumption iid on  $\epsilon_i$ ), obtain the Mill's ratio and compute its inverse (), for each observation in our sample. The Mill's ratio is included as additional explanatory variable in equation (4) to obtain:

$$Y_{2i} = X_i \beta + \gamma \lambda + \eta \tag{7}$$

Finally, the OLS equation is run on the positive values of  $Y_{2\ell}$ . If the parameter estimate associated with the inverse Mill's ratio is statistically significant, OLS estimates on positive values of loan amount only are biased. Estimation of the model requires that at least one variable included in the selection model should not be included in the outcome equation.

#### 3.3.2 Description of the variables used in the regression

There are a host of variables that influence the borrowing behavior of the youth MSE owners. The vector of explanatory variables include different characteristics: demographic variables (such as sex, household size, marital status, and age), education, economic activities of the household, information about loans, asset ownership, risk exposure, remittance, investment

opportunities, interest rate on savings, and variations in geographic locations. The dependent variable is the volume of loan from formal and informal sources. However, since there are MSE operators who didn't take loans, it is also appropriate to use a dummy variable.

## 3.3.3 Regression results

As its name implies, the Heckman selection model is estimated in two steps: the first step is estimated using the Probit model the predicted values of which are retained to estimate the inverse Mills ratio for each observation; and the second step is an OLS regression with the inverse Mills ratio included as a regressor. The results in Table 7 show that the Mills ratio is found to be statistically significant, implying that the error terms of the MSE operator's credit function and the decision function are correlated. This also implies that it is suitable to use Heckman's model to estimate the credit function and it is unacceptable to split the decision function and the credit function or estimate independently.

The results in Table 7 reveal that the age of the youth MSE owner, the type of enterprise, and possession of a business plan are significant variables influencing the likelihood of taking loans. In other words, as the age of the owner increases, the probability to take loans tends to increase. The type of enterprise was found to have a negative effect, indicating that microenterprise operators have lower probability of taking credit than small enterprise owners. This could be because small enterprise owners have a higher capital than microenterprise operators and may, therefore, perceive that they have the ability to repay back the loan. Possession of a plan to stay and expand the business was also found to have a positive effect on the likelihood of accessing credit. Since MSE operators who have the plan to expand the business need more capital, they will have relatively higher probability of taking credit compared to those without a clear plan for expansion.

In the second stage of the Heckman model, attempts are made to explore the factors that affect the size of credit, after youth MSE operators made the decision to access credit. The findings of the study in Table 7 show that the age of the MSE owner, the type of enterprise, the origin of the owner (whether the respondent is a migrant or born in the town where the business is located),

the geographic location of the business, and possession of a business plan are statistically significant variables influencing the size of credit accessed by the operators at 5%, 1%, 5%, 5% and 5% level of significance, respectively. In other words, as the age of an MSE owner increases, the amount of loan the operator takes becomes higher. Operators engaged in the microenterprises subsector are found to have accessed lower amounts of credit than small enterprise operators. In other words, as small enterprise owners relatively need higher amounts of capital to run their businesses compared to microenterprise operators, the loan amount they accessed tends to increase. The variable used to capture whether the youth MSE owner is a migrant or not was found to be a significant variable affecting the size of the loan, which may be due to the availability of limited social networking opportunities for migrant operators. However, this picture has changed for migrants on getting better amounts of loan. Migrant have been able to access better amounts of loan compare to the locals. This implies that the main challenge for migrant MSE owners is to access credit, not to get better amounts of loan. Why they are not accessing the credit service needs to be figured out. This could be related to getting the required documentation, like residence ID from that specific Kebele. Those who operate outside their homestead took higher amounts of loan compared to those in other locations. This could be partly explained by the lower capital and lower loan size requirement of home-based enterprises (which are usually small businesses) compared to those located in commercial locations. Moreover, possession of a business plan influences the loan amount accessed by youth MSE operators. Those enterprises that plan to stay and expand the existing business are found to have higher loan amounts for the simple reason that MSEs planning expansion need higher capital, implying higher loan size.

Table 7: Results of Heckman two-stage regression

| Foods a Asses Washing                                  | 1 <sup>st</sup> -stage (Credit dummy) | 2 <sup>nd</sup> -stage (Loan amount) |
|--|---------------------------------------|--------------------------------------|
| Explanatory Variables                                  | coef/t                                | coef/t                               |
| Household size in number                               | 0.002                                 | 0.006                                |
|  | (0.167)                               | (0.288)                              |
| Age of the owner/manager (in years)                    | 0.010**                               | 0.025**                              |
|  | (2.040)                               | (2.165)                              |
| Dummy for male ()                                      | -0.057                                | -0.135                               |
| •  | (-0.948)                              | (-1.400)                             |
| Dummy for no formal education                          | 0.025                                 | 0.096                                |
| •  | (0.139)                               | (0.306)                              |
| Dummy for grade 1-4 level of education                 | 0.002                                 | 0.009                                |
| ,                | (0.011)                               | (0.039)                              |
| Dummy for grade 5-8 level of education                 | -0.021                                | -0.042                               |
| , , , , , , , , , , , , , , , , , , ,                  | (-0.226)                              | (-0.285)                             |
| Dummy for grade 9-12 level of education                | 0.020                                 | 0.054                                |
|  | (0.281)                               | (0.444)                              |
| Dummy for sole ownership                               | -0.037                                | -0.091                               |
|  | (-0.586)                              | (-0.905)                             |
| Dummy for micro enterprise                             | -0.138*                               | -0.338***                            |
| summy for miero enterprise                             | (-1.794)                              | (-3.360)                             |
| Dummy for migrant                                      | 0.072                                 | 0.182**                              |
| Summy for migrant                                      | (1.264)                               | (1.990)                              |
| Dummy for single                                       | 0.058                                 | 0.141                                |
| build for single                                       | (1.031)                               | (1.362)                              |
| Dummy for divorced                                     | -0.057                                | -0.138                               |
| Duminy for divolect                                    | (-0.320)                              | (-0.486)                             |
| Dummy for widowed/widower                              | -0.140                                | -0.353                               |
| Duminy for widowed widower                             | (-0.456)                              | (-0.711)                             |
| Dummy for engage in MSE-provide better opportunity     | 0.001                                 | (0.711)                              |
| building for engage in Mobb provide better opportunity | (0.016)                               |                                      |
| Dummy for changing location of the enterprise          | 0.010)                                | 0.230**                              |

| Explanatory Variables   | 1 <sup>st</sup> -stage (Credit dummy)<br>coef/t | 2 <sup>nd</sup> -stage (Loan amount)<br>coef/t |
|---|---|--|
|   | (1.543)   | (2.207)  |
| Dummy for having adequate market for products                     | 0.006   | 0.007  |
|   | (0.108)   | (0.073)  |
| Dummy for social networking                                       | 0.002   |  |
|   | (0.050)   |  |
| Dummy for working in a cluster                                    | 0.080   | 0.207  |
|   | (0.980)   | (1.508)  |
| Dummy for policy predictability                                   | -0.046  | -0.118   |
|   | (-0.801)  | (-1.313)                                       |
| Dummy for future plan to stay and expand in the business          | 0.118*  | 0.286**  |
|   | (1.711)   | (2.540)  |
| Savings of MSE operators in Birr                                  | 0.000   | 0.000  |
|   | (0.974)   | (1.557)  |
| Approximate average sales per month for the whole business period | -0.000  | -0.000   |
|   | (-0.256)  | (-0.461)                                       |
| Current capacity utilization (%)                                  | 0.001   | 0.002  |
| (v)   | (0.852)   | (1.263)  |
| Constant  | (,  | -1.183***                                      |
|   |   | (-2.877)                                       |
| Number of observations  |   | 903  |
| Lambda  | 0.  | 637***   |
|   | (4.0  |  |
| Rho   | 1.0   |  |
| Sigma   | 0.6   |  |

**Note:** \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; and t-value in parentheses. The base for education is above high school. The base for marital status is married.

## 3.6 Challenges of youth MSE operators to expand their business

As of June 2014, 419,554 new and existing MSE operators borrowed about 4.29 billion Birr through MFIs. Out of the total loan extended, about 3.07 billion Birr was disbursed to MSEs at start-up phase. The remaining amount (Birr 891.1 million and Birr 479.3 million) was given to growing and mature MSEs, respectively. Moreover, the five large MFIs in Ethiopia accounted for about 98.1% and 95.3% of the savings mobilized and loans disbursed to MSEs, respectively. Out of the outstanding loan, the non-performing loan was only 4.4% (FeMSEDA 2014). However, as per the credit policy manual, if the repayment rate of an MFI in a specific town is below 97%, the finance provider should give up extending loans to the MSE operators until the repayment rate improves to the required 100% level.

The report of FeMSEDA (2014) shows that a significant proportion of the MFI loans were extended to non-priority sectors. For example, the loan provided to the trade sector was by far the largest, accounting for about 38.3% or 1.64 billion Birr, followed by the service sector (19.7%), and urban agriculture (18.9%). The construction sector accounted for 7.3% of the total loan disbursement of MFIs. Although the manufacturing sector was a priority sector in the MSE development strategy and the GTP, only 356.74 million Birr (8.3%) was disbursed by MFIs to the sector as of June 2014. This has been a serious concern for the national MSE development council and FeMSEDA. When the CEOs of MFIs were asked to explain the reasons behind the low performance of the priority sector, they reported that there were very limited MSE operators who applied for loans to engage in the manufacturing sector. They reiterated that they didn't have any experience of rejecting a viable business plan submitted by MSE operators who intend to engage in the manufacturing sub-sector. On the other hand, collateral and pre-loan saving requirements were also identified as constraining factors behind the low disbursement of loans to MSE operators in the manufacturing sector. Moreover, although there wasn't any tailored support intervention to promote female-owned MSEs, the Women Entrepreneurs Development Project (WEDEP), financed by the World Bank, has made a modest contribution to boosting the provision of loans to female-owned MSEs. This project has also partially addressed the liquidity problem of MFIs.

The top three business challenges ranked by youth-owned MSEs in the sample survey included lack of access to finance (27.4%), production premises (19.6%), and marketing premises (17.8%). Inadequate quantity and quality of government support services (6.1%) and marketing problems (5.1%) were ranked as the fourth and fifth important factors constraining the growth of youth-owned MSEs (Table 8). The proportion of microenterprise owners who ranked lack of financial access as the main challenge was much higher than the that of small enterprise owners, showing the seriousness of financial access containment to expand micro-enterprise operators. The survey results also show that access to finance was a serious problem constraining the development of youth-owned enterprises during the start-up and expansion phases. The result of this study is quite different from a study conducted ten years ago by Gebrehiwot and Wolday (2004), where the top four very severe problems of MSEs were identified as: (i) high tax and inefficient tax administration, (ii) high collateral and lack or inadequate access to credit, (iii) lack of or inadequate business premises, and (iv) lack of business support services. The study of Tegegne and Mulat (2005) in small towns in Ethiopia, on the other hand, revealed that about 54% of the MSE operators reported lack of working capital as a major problem in expanding their businesses.

The findings of this study show that youth-owned MSEs in Ethiopia had a serious challenge of accessing loan, and had, therefore, to rely on other sources. About 35% of the youth MSE owners reported that they had liquidity problems. About 71.3% and 70.1% of the respondents used their own savings and retained earnings to meet their working and investment capital needs, respectively. About 8.7% of the respondents used borrowing from the formal sector to finance their working and investment capital needs, while about 6% used borrowing from the informal sector. However, the proportion of small enterprise owners (14%) who used borrowing from formal financial institution was higher compared to that of the microenterprise operators (5.4%). A higher proportion of female small enterprise owners used banks and MFIs as a source of funding compared to that of the female microenterprise owners. About 3.5% and 8.3% of the respondents reported that they addressed their working and investment capital needs by accessing credit from suppliers' credit and advances from clients, respectively.

Table 8: The most important business problems ranked first by MSE owners

|                                  |        | Mic    | cro    |        |        | Sm     | all    |        | ole<br>ple      |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------|
| Problems                         | Female | Male   | Mixed  | Total  | Female | Male   | Mixed  | Total  | Whole<br>sample |
| Lack of access to land           | 19.61  | 19.53  | 22.39  | 20.26  | 14.04  | 26.17  | 15.84  | 18.58  | 19.58           |
| Lack of adequate infrastructure  | 5.23   | 2.34   | 4.48   | 3.68   | 14.04  | 5.61   | 3.47   | 5.74   | 4.51            |
| Lack of market place             | 20.92  | 15.63  | 12.69  | 16.39  | 22.81  | 16.82  | 20.79  | 19.95  | 17.82           |
| Lack of business information     | 5.88   | 5.08   | 7.46   | 5.89   | 0.00   | 4.67   | 2.97   | 3.01   | 4.73            |
| Government bureaucracy           | 0.65   | 3.91   | 2.99   | 2.76   | 1.75   | 3.74   | 5.94   | 4.64   | 3.52            |
| Lack of government support       | 4.58   | 4.69   | 6.72   | 5.16   | 3.51   | 4.67   | 9.90   | 7.38   | 6.05            |
| Tax administration               | 4.58   | 1.95   | 2.24   | 2.76   | 1.75   | 1.87   | 2.48   | 2.19   | 2.53            |
| Low demand for the output        | 6.54   | 3.52   | 4.48   | 4.60   | 8.77   | 9.35   | 2.97   | 5.74   | 5.06            |
| Lack of proper technology        | 0.00   | 0.39   | 0.75   | 0.37   | 1.75   | 0.00   | 0.99   | 0.82   | 0.55            |
| Labor inefficiency               | 0.65   | 0.39   | 0.00   | 0.37   | 3.51   | 0.00   | 0.50   | 0.82   | 0.55            |
| Low raw material supply          | 0.00   | 1.56   | 3.73   | 1.66   | 1.75   | 1.87   | 3.47   | 2.73   | 2.09            |
| The customs and trade regulation | 1.31   | 1.17   | 1.49   | 1.29   | 0.00   | 0.00   | 2.48   | 1.37   | 1.32            |
| Lack of access to finance        | 27.45  | 34.77  | 26.12  | 30.57  | 24.56  | 23.36  | 21.78  | 22.68  | 27.39           |
| Others                           | 2.61   | 5.08   | 4.48   | 4.24   | 1.75   | 1.87   | 6.44   | 4.37   | 4.29            |
| Total                            | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00          |

**Source:** AEMFI, Survey on Youth-owned MSE in Ethiopia (2014)

The findings of the study are consistent with the results of Gebrehiwot and Wolday (2004), where own savings/retained earnings (80.5%) were rated as the single most important source of finance for both working and investment capital, followed by informal borrowing (8.7%), suppliers' credit (4.9%), formal borrowing (3.9%), and clients' advance (1.3%). Trade credit appeared to be used as a substitute for borrowing from formal financial institutions. Similarly, in Kenya, purchases of new machines were primarily funded through the slow process of accumulating retained earnings: two-thirds of

small firms in Kenya relied solely on savings to finance their newly purchased machines (Vandenburg, 2003). An IFC study of 10,000 firms found that, more than any other obstacle across 80 countries, financing was ranked as one of firms' top three challenges of MSEs (Schiffer and Weder 2001). Stephanou and Rodriguez (2008) reported that access to credit is one of the biggest constraints for MSEs in Colombia. Binks and Ennew (1997) identified lack of access to finance together with management, labor skills, and regulation as the main constraints of small and medium enterprises in the U.K. Hutchinson (2006) concluded that inability to raise external finance in Slovakia is one of the main obstacles for the small and medium enterprises. Access to finance was second-ranked, most pressing problem faced by the Euro area (European Central Bank 2011). Studies in Central and Eastern Europe indicated that lack to access to external finance was one of the main problems of small and medium enterprises (Anderson et al 1997; Gros and Suhreke 2000; Konings *et al* 2000).

#### 4. Conclusions

The implementation of the government MSE-support program in Ethiopia has been successful in creating employment to millions of people, particularly the youth. However, providing loan to the youth MSE operators who have limited business experience and exposure, limited technical skills, inadequate property collateral and track record, and inadequate level of commitment, and the wrong mindset to engage in blue-collar jobs and self-employment are the serious challenges to offer a prudent lending service by finance providers, particularly MFIs. Lack of access to finance, land, and marketing place was the most important business challenge affecting the expansion or growth of youth-owned MSEs. Since accessing a loan from formal finance providers was the single most important factor limiting the expansion and growth of many of the youth MSE operators, they used their own savings/retained earnings to meet their working and investment capital needs, respectively. However, the proportion of the small enterprise owners who used borrowing from formal financial institutions was relatively higher than that of the microenterprise owners. A higher proportion of female small enterprise owners used the formal financial institutions as a source of funding compared to that of the female microenterprise owners.

The findings of the study show that inadequate collateral and difficulties in proving their credit worthiness or absence of credit history were by far the main reasons that discouraged youth MSE operators from submitting applications for bank loans, followed by difficulties in processing loans, and the high cost of borrowing. The magnitude of the problem related to property collateral, difficulties in processing loans, and the high cost of borrowing were relatively higher for micro enterprise owners compared to small enterprise operators. On top of the above reasons, female microenterprise owners reported that fear of default and getting indebted and doubts whether they would get the loan were the factors discouraging them from applying to get bank loans.

The result of the regression indicates that the age of the MSE owner, the type of enterprise, and possession of a business plan are significant variables influencing the likelihood of taking loans. In other words, as the age of the MSE operator increases, the probability for him/her to take a loan tends to increase. The type of enterprise was found to have a negative effect, indicating that operators in microenterprises have lower probability of taking credit than those engaged in small enterprises. MSE operators' plan to stay and expand their business was also found to have a positive effect on the likelihood of taking credit. The findings of the study also reveal that the age of the owner, the type of enterprise, the origin of the owner, the location of the business, and possession of a business plan are statistically significant variables influencing the size of credit accessed by the operators.

Although the development of the financial sector (availability and affordability of financial services, financing local and equity markets, ease of access to loans, and venture capital availability) has a direct impact on the overall financial deepening, there is a need for a deliberate intervention and tailored support program by government and development partners to improve financial access to the youth MSE operators without distorting the financial market and ensuring the sustainability of the finance providers. This includes providing regular awareness creation work, accepting movable property as collateral, improving the commitment of regional offices, and revisiting the group formation process. However, the issue of sustainability (the extent to which the financial services can be provided without dependence on subsidies) is very critical in designing and implementing financial support programs to youth MSE operators.

### References

- Anderson, R. and Chantal K. (1997). Finance and investment in transitional Czech enterprises (1993-1994) IRES-Institut de Recherches. Department of economics. Universite Catholique de Louvain. Discussion Paper 9715. Louvain-Neuve.
- Binks, M. and Ennew C. (1997). Liquidity constraints and investment in transitional economies: The case of Bulgaria. Economics of transition. Vol. 9. pp. 453-475.
- European Central Bank. (2011). Survey on the access to finance of SMEs in the Euro area: Report on SME access to finance survey.
- Federal Democratic Republic of Ethiopia. (2011). Micro and small enterprise development strategy. Addis Ababa.
- Federal Democratic Republic of Ethiopia, Ministry of Finance. (2010). Growth and transformation plan (GTP) (2010/11 2014/15). Addis Ababa.
- FeMSEDA. (2014). Compiled report on the implementation of the 2013/14 planned activities of the steering committees and other stakeholders. A report submitted to the federal MSE development council. Addis Ababa. (Amharic).
- \_\_\_\_\_\_. (2014A). Annual statistical bulletin of the MSE development in Ethiopia. FeMSEDA information technology directorate. Addis Ababa (Amharic).
- \_\_\_\_\_\_. (2011). Policy/manual to mobilize savings and provide credit facilities for MSE operators (in Amharic).
- Gebrehiwot Ageba and Wolday Amha. (2004). Micro and small enterprise development in Ethiopia: Survey report. Ethiopian Development Research Institute (EDRI). Research Report 11.
- Gros, D. and Suhrcke M. (2000) Ten years after: What is special about transitional countries? European Bank working paper No. 56.
- Heckman, J. J. (1979). "Sample Selection Bias as a Specification Error," *Econometrica*, Vol. 47, No. 1.
- Hutchinson J. (2006). Comparing the impact of credit constraints on the growth of SMEs in a transition country with an established market economy. Small business economics. Vol. 27. pp. 169-179
- Konings, J., Rizov M. and Vandenbussche H. (2003). Investment and credit constraints in transition economies: Micro evidence from Poland, the Czech Republic, Bulgaria and Romania. Economics letters. Vol. 78. pp. 253-258.
- Schiffer, M., & Weder, B. (2001). Firm size and the business environment: Worldwide survey results. IFC working paper number 43. Washington, DC: International Finance Corporation.

- Stephanou, C. and Rodriguez C. (2008). Bank financing to small and medium-sized enterprises (SMEs) in Colombia. Policy research working paper No. 4481. World Bank. Washington DC.
- Tegegne Gebre-Egziabher and Mulat Demeke. (2005). Micro enterprises in small town, Amhara region, Ethiopia: Nature of performance. Ethiopian journal of economics. Vol. XIV, No.1. pp. 79-111.
- Tobin, J. (1958). "Estimation of relationships for limited dependent variables," *Econometrica*, Vol. 26, No. 1.
- Vandenberg, P. (2003). Adopting to the financial landscape: Evidence from small firms in Nairobi. World development. Vol. 31, No. 11. pp. 1829-1843.
- Wolday Amha, Tadele Ferede and Mulat Demeke. (2013). The impact of financial access on firm growth. Evidence from Ethiopian grain traders and millers. Ethiopian journal of economics. Vol. XXII. No. 1.